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SATELLITE CALIBRATION DATA ANNUAL DATA REPORT - 1977

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By
Louis I. Murillo
L. Edwin Williamson

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US Army Electronics Research and Development Command
ATMOSPHERIC SCIENCES LABORATORY
White Sands Missile Range, NM 88002

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report contains data from observations of meteorological and radiative parameters at selected satellite calibration target sites. These sites include the highly reflective gypsum field in southcentral New Mexico, a dark lava surface, a nearby fresh water reservoir and over desert terrain. The report also contains narrative descriptions of the instruments in use at the target sites.		

PREFACE

The data presented herein were collected for application to satellite calibration. However, the data represent a meticulous effort of simultaneous mesoscale observations of surface meteorological and radiative parameters, and as such, may be directly applicable to other, nonsatellite applications. Persons or organizations requiring these data on a week-by-week time schedule or for special observations in conjunction with specific satellite observations may write to:

Commander/Director
Atmospheric Sciences Laboratory
US Army Electronics Research and Development Command
ATTN: DELAS-MS
White Sands Missile Range, NM 88002

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INTRODUCTION

The Atmospheric Sciences Laboratory (ASL) has broad objectives in the utilization of meteorological satellite data as applied to Army needs. A principal effort in the utilization of such data involves the development of techniques for quality assurance of the data collected by satellites. An example of the necessity of such assurance can be found in Taylor and Williamson.* Most satellite sensors cannot be manually manipulated or visually examined in orbit; therefore, methods of evaluating their output must be found to determine the performance of the instruments. To accomplish this, surface parameters which can form a catalog of ground truth data for comparison with satellite data must be collected at prescribed target sites.

A systematic effort has been underway since 1973. Sites and instrumentation were selected and acquired the first year, and data were collected the second and subsequent years. Data collection facilities are now in operation at four instrumentation sites (one on the lava flow, two on the white sands, and one on a fresh water surface). Measurements are made in adherence to a coordinated satellite overpass schedule and the Meteorological Rocket Network. The data published consist of information on several atmospheric and radiative parameters. All measurements are performed by qualified Army meteorological observers and civilian staff members. The data collected during 1977 constitute the bulk of this report and are preceded by a brief description of the instruments and technology used.

SITE DATA

Several target sites have been selected within and near White Sands Missile Range (WSMR), NM (Figure 1). These sites display a wide range of albedo and emissivity characteristics for empirical comparisons with satellite-derived data. Two of the target sites are on white gypsum sand for high albedo data and one is on a dark lava bed for low albedo data. One site on a water surface and one over desert terrain were also operated. Data from these sites are included in this report. A significant feature of the geography of these sites is that they underlie nearly the same atmosphere column when viewed from a satellite, all being located within approximately a 40-mile (64-km) radius.

WHITE SANDS SITE (METSAT I)

The White Sands site actually consists of three physical instrument locations (Figure 2). The White Sands area consists of a flat plain and an area of white gypsum and dunes. The demarcation between these areas is distinct, although this distinction is not always apparent in satellite data. The data site was selected so that from a centrally

*S. E. Taylor and L. E. Williamson, 1973, "Satellite Calibration Target Has Brightness Equivalent to Clouds," Bull. Am. Met. Soc., 54(6):551

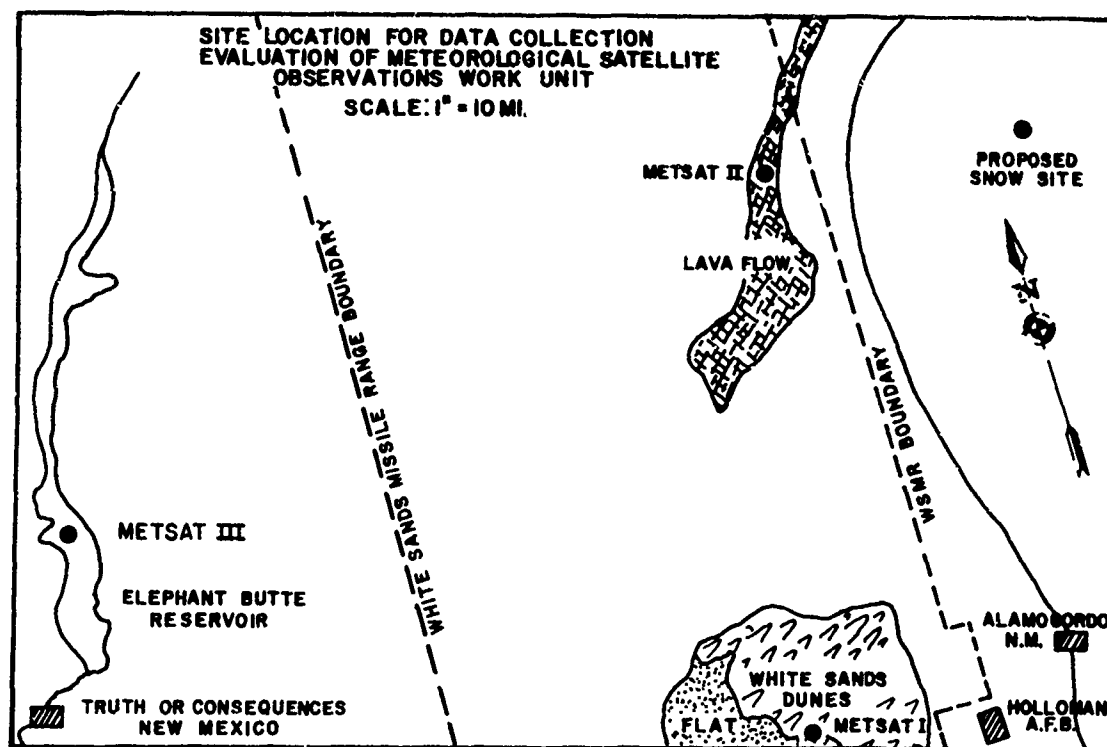


Fig. 1. General map of the WSMR Meteorological Satellite Evaluation System Target Sites in relation to each other and the WSMR boundaries.

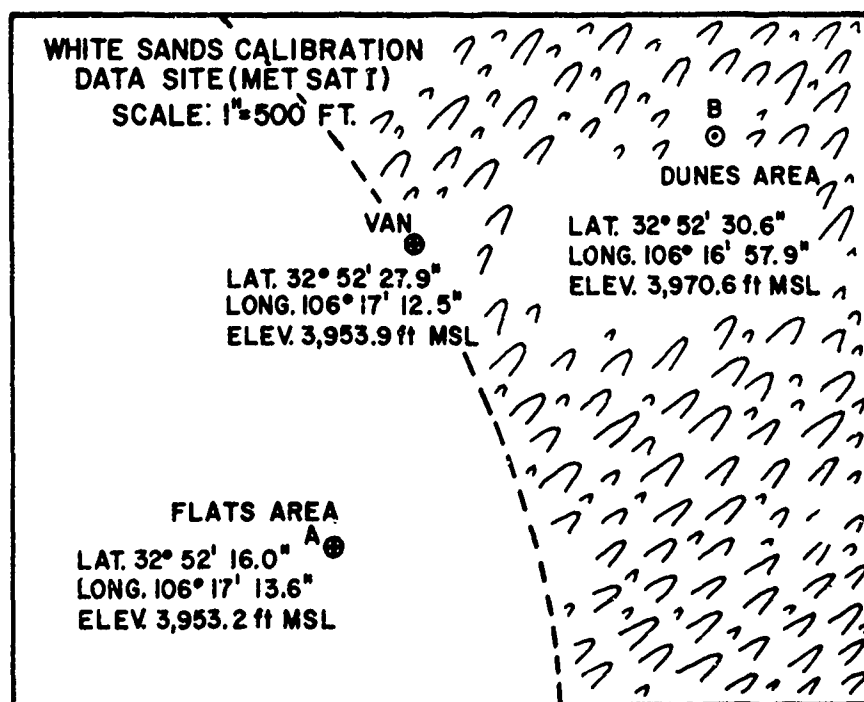


Fig. 2. Detail map of the METSAT I site showing the actual data collection points in relation to the terrain features.

instrumented location data could be collected from both the flat and the dunes areas. Locations A and B are the flats and dunes areas, respectively. Each of these locations contains an instrument mast from which outgoing spectral reflectance and surface radiant temperature data are collected. Soil temperature and soil moisture data are also acquired at each of these points. At the instrumented van, dynamic, thermodynamic, and incoming spectral radiation data are collected. Figure 2 also shows geodetic coordinates of the White Sands site.

LAVA BED SITE (METSAT II)

The lava bed site is located within the narrow portion of the lava bed which is approximately 40 miles (64-km) north of the METSAT I site. Spectral reflectance tests conducted via helicopter verified that the site was, generally, representative of the lava flow before it was qualified as a permanent site. The site is equipped with a complete set of instruments similar to those at METSAT I. Geodetic coordinates of the lava site are: latitude $33^{\circ} 28' 42.8''$ N, longitude $106^{\circ} 09' 17.3''$ W, and elevation 4,519.4 feet (1400 m) MSL.

WATER SITE (METSAT III)

The water site is located on the Elephant Butte Reservoir at latitude $33^{\circ} 13' 13.78''$ N, longitude $107^{\circ} 10' 48.89''$ W, and nominal elevation 4300 feet (1310 m) MSL.

DESERT SITE (METSAT IV)

The desert site is located approximately 7 miles (11.2 km) east southeast of the main post area of White Sands Missile Range at latitude $32^{\circ} 21' 11.0''$ N, longitude $106^{\circ} 22' 59.24''$ W, and an elevation of 3991 feet (1220 m) MSL. The area is typified by small sandy dunes with shrubs and desert vegetation.

INSTRUMENTATION

Since instrumentation systems installed at each site are as identical as possible, interpretative differences or implications are minimal. Each instrumentation system used on the calibration sites is described below to give the user a clearer understanding of the data. The order of discussion follows the listing on the data publication form (Figure 3) and is presented in two categories: meteorological (surface and upper air) and radiative.

METEOROLOGICAL

Surface

T_a - Air Temperature. These data are collected by a mercury-in-glass thermometer. Temperature is recorded on the standard form in degrees Celsius.

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION _____

DATE OF OBSERVATION _____ TIME _____ (Local) _____ (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}					
I I_a I_d N N_a N_b N_c N_d i i_a i_d					
$T_{g/w}$ T_s ψ ϵ E_l, A_z					
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition ^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_d = \text{RG695}$
 [Units: Milliwatts per square centimeter (mW cm^{-2})]

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

DIRSEL-BL-MS 121, 28 Mar 75 (Rev.)

Figure 3. Format for Meteorological Satellite Calibration Data--1977.

T_{dp} - Dew Point. Dew point is evaluated from measurements of dry bulb and wet bulb temperatures.

Thermal data, T_a and T_{dp}, are collected approximately 2 m above ground.

W_dW_s - Wind Direction and Speed. Wind direction and speed data are collected with a USWB F-420C airport wind indicator located 4 m above the surface. The direction is recorded in degrees and the speed in meters per second.

P - Pressure. Atmospheric pressure is determined by means of an H. E. Sostman and Company pressure transducer. The electrical output is observed on a digital voltmeter. The voltage value is modified by certain instrument constants provided by the manufacturer, and the resulting station pressure is entered on the data form in inches Hg.

C-Sky Condition (Sky Cover). This parameter is entered in typical meteorological format, and all cloud heights and amounts are visually estimated by qualified meteorological observers. The entry is made with conventional meteorological symbols.

M - Precipitation. The entry on the data form is "yes" or "no" to indicate whether precipitation has fallen on the site within the preceding 48 hours. This information is drawn from an examination of records from manned observation stations nearby.

T_{a25} and T_{dp25}. Air temperature and dew point of air sample drawn from the 25 m level. Data acquired at METSAT II only.

Upper Air

Rocketsonde Data. The upper atmospheric data acquired by rocketsondes which are included with the ground level are from the Meteorological Rocket Network Sounding Station at WSMR, NM. The rocket sounding is scheduled as nearly coincident with the satellite overpass as is compatible with the WSMR operational schedule. Generally, the time of rocket sounding will be within 1 hour. The coordinates of the rocket station are latitude $32^{\circ} 29' 07.78''$ N, longitude $106^{\circ} 24' 49.14''$ W. The launch direction of the rocketsondes is to the NNW and deployment at altitudes of the rocketsonde instrumentation is generally in the vicinity of latitude $32^{\circ} 45' N$, longitude $106^{\circ} 31' W$.

Balloonsonde Data. The upper air data acquired by balloonsonde, which is included with the calibration data, are generally provided from the ASL Holloman Upper Air Section, Meteorological Station (within WSMR) and located at latitude $32^{\circ} 53' N$, longitude $106^{\circ} 05' W$.

RADIATIVE

I - Incoming Global Radiant Flux between 0.285 and 2.800 microns. An Eppley Precision Spectral Pyranometer (PSP) is used to collect these data. The data are collected in the form of millivoltage readings, which are then converted via manufacturer-supplied instrument constants to milliwatts per square centimeter ($mW\ cm^{-2}$). An Eppley White Glass Filter Dome (WG285) is used for this spectral band.

I_a - Incoming Global Radiant Flux between 0.500 and 2.800 microns. This measurement is identical to that of I, except that a yellow filter dome (GG495) is used on the PSP to permit only that radiation in the specified bandwidth.

I_d - Incoming Global Radiant Flux between 0.700 and 2.800 microns. A PSP with a red (RG695) filter dome is used. Data reduction and processing are identical to those of I and I_a.

N - Normal Radiant Flux between 0.285 and 4.000 microns. An Eppley Model 15 pyrhelimeter with a fused silica filter is used to measure these data. After direct manual observation of millivoltage output plus the application of the instrument and conversion constants, the flux is recorded in milliwatts per square centimeter ($mW\ cm^{-2}$).

N_a - Normal Radiant Flux between 0.500 and 4.000 microns. Data are collected with a yellow (GG495) filter on the pyrhelimeter.

N_b - Normal Radiant Flux between 0.530 and 4.000 microns. Data are collected with an OG530 filter on the pyrhelimeter.

N_c - Normal Radiant Flux between 0.630 and 4.000 microns. Filter RG630 is used.

N_d - Normal Radiant Flux between 0.700 and 4.000 microns. Filter RG695 is used.

N_a , N_b , N_c , and N_d are collected as per N .

i - Outgoing Radiant Flux between 0.285 and 2.800 microns.

i_a - Outgoing Radiant Flux between 0.500 and 2.800 microns.

i_d - Outgoing Radiant Flux between 0.700 and 2.800 microns. Outgoing flux data are collected with a set of Eppley PSP identical to those used to collect the incoming flux data. These instruments are mounted similarly to those used for I data, but are inverted and tower-mounted approximately 4 m above the ground surface.

The above set of radiative data includes flux values for 10 directly measured bands, each of which includes a portion of the visible and infrared bands (Figure 4). Arithmetic combinations of these values render additional spectral discriminations within several narrower bands. Additional data that are pertinent to radiation analysis are as follows:

$T_{g/w}$ - Soil/Water Temperature. This temperature is collected with a copper constantan thermocouple which is located from 1 to 4 mm below the ground or water surface. Its voltage value is observed on a meter and manually converted to temperature via references to the manufacturer's calibration chart. It is recorded on the standard data form in degrees Celsius.

T_s - Surface Temperature. The apparent radiant surface temperature is determined by a precision radiation thermometer [Barnes PRT-5 (9.5 - 11.5 micron)]. The temperatures are read directly from the instrument meters and recorded in degrees Celsius.

ψ - Soil Moisture. This parameter is currently determined gravimetrically for the White Sands sites. It is recorded in percent moisture of a soil sample taken from the upper 1 cm of the surface.

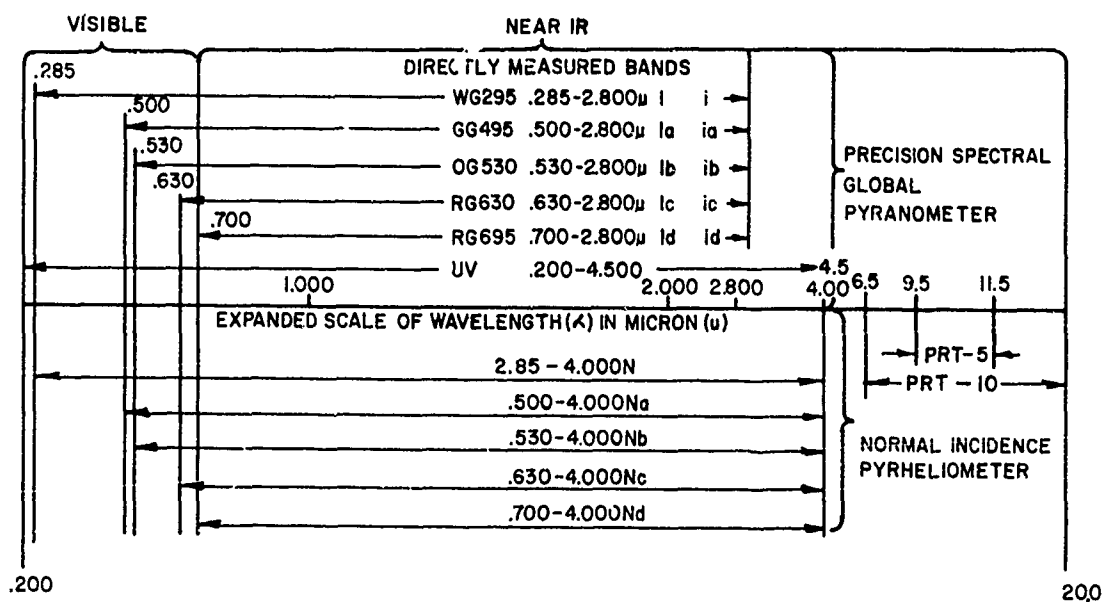


FIG. 4 MEASURED RADIATION BANDS REPORTED ON OBSERVATION FORM.

ε - Emissivity. This parameter is not routinely measured at each site. Measurements are being made of the entire area. The measurements technique involves the change in apparent radiant temperature of the test surface when the background radiation is artificially altered. When the emissivity map is completed, it will be published with the annual data report.

Special Instrumentation Data. Occasionally special requirements may exist for data from other sites, altitudes, or for other parameters. These data, when available, are included on the standard form and are individually identified.

Instrumentation Calibration. All primary instrumentation (sensors) are calibrated semiannually, and all secondary (sensors, recorders, meters, etc.) annually. An additional complete set of instruments is available for rotational service, and all instruments undergo additional calibration service if relocated and/or modified, e.g., filters changed.

DATA PROCESSING

Data Form. When the data are collected and reduced as described above, they are entered on a data sheet which includes certain radiosonde and rocketsonde data collected from nearby sites on WSMR. Radiosonde* and rocketsonde** data are presented in accordance with national standards. The current format for ground truth calibration data consists of the satellite identifier and a list of the data parameters and their units and the site locations.

Data Dissemination. Two primary distributions are used. Mailings are made weekly to those users who have requested to be placed on the mailing list. Special observations are made occasionally and the data are relayed via telephone or special mailings.

Data Publications. All data are cataloged for assembly and binding on an annual basis. A collection of a year's data is published in the form of an ERADCOM Technical Data Report. Special data collections will be assembled and published as special data reports, or included in the annual report, as appropriate.

*Federal Meteorological Handbook No. 4, Radiosonde Code, January 1972

**Federal Meteorological Handbook No. 10, Rocketsonde Observations, July 1975

Changes and Corrections. This report represents the fourth year of routine data collection under this program, and some changes in techniques and processes have been made. Where significant, these changes have been brought to the attention of the data users. The weekly observational schedule is made to coincide with specific satellite schedules. An observation coincident with NOAA series satellites will continue to be made on a weekly basis, and observations coincident with other satellites, i.e., NIMBUS, DMSP, as required.

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 4 January 1977

TIME 0906 (Local) 1606 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	5.7	5.7	5.8		9.9
T _{dp}	0.3	0.3	-8.1		2.4
W _d , W _s	060 2.7	060 2.7	050 3.6		315 3.1
P	25.90	25.90	25.28		25.93
C	80 ① 150 ① 210-①	80 ① 150 ① 210-①	230-①		①
M	no	no	no		no
T _{a25}			8.1		
T _{dp25}			-7.0		
I	36.24	36.24	31.71		33.95
I _a	25.94	25.94	27.01		26.98
I _d	16.74	16.74	17.53		20.45
N	89.14	89.14	85.64		84.55
N _a	71.14	71.14	69.18		64.88
N _b	66.79	66.79	64.97		59.77
N _c	55.17	55.17	54.82		52.11
N _d	48.91	48.91	47.29		44.70
i	16.46	20.48	4.14		6.76
i _a	14.71	17.38	3.72		6.53
i _d	9.65	10.81	3.13		5.08
T _{g/w}	5.0	7.0	5.5		6.7
T _s	11.0	10.0	6.5		10.2
ψ	21.6	20.2			0.9
ε					
El, Az	19.1 135.5	19.1 135.5	18.8 135.7		19.4 135.3
REMARKS: METSAT I temperatures at 25 meter height will not be measured until further notice. METSAT III - not operated this date. METSAT IV - commenced operations this date. Units of measurement for Radiant Flux are reported in milliwatts per square centimeter effective this date.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = % Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 4 January 1977

RADIOSONDE: (0800 MST) TTAA 54154 72HMS 99871 01456 00000 00112 /////
85146 05058 11003 70300 07107 28541 50560 17158 27089 40724 25745 35088 30821
38162 25052 485// 20195 599// 15375 597// 10622 671// 88178 617// 77357 26121
41929

TTBB 5415/ 72HMS 00871 01456 11850 05058 22832 03662 33769 01911 44748 02731
55710 06502 66700 07107 77680 02369 88670 02368 99556 14167 11489 17756 22406
26721 33400 25745 44391 24560 55348 28764 66217 565// 77200 599// 88178 617//
99172 611// 11168 571// 22124 661// 33118 645// 44107 675// 55100 671// 51515
10186 11691 05743 11687 02557

TTCC 54151 72HMS 70837 661// ///// 50046 589// ///// 30370 531// 24011 20633
517// 29033 10090 441// 23047 88999 77999

TTDD 54151 72HMS 11896 731// 22838 645// 33700 661// 44464 567// 55392 607//
66370 563/ 77286 505// 88256 529// 99241 503// 11200 517// 22156 491// 33124
50911 44100 441// 55088 453//

ROCKETSONDE: (0930 MST) RRXX 04163 72269 81010 11101 25550 23010 26550 21005
30551 22011 32547 25019 33546 26016 35537 30015 36529 32018 32521 32019 39523
36018 40523 02019 41524 06014 42526 07013 44514 09026 45517 12026 46515 13019
50512 08023 51510 07023 53514 07028 55520 09023 56518 09027 57521 11030 58526
12017 59530 05006 60/// 01026 61/// 01050 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 5 January 1977

TIME 0911 (Local) 1611 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	3.7	3.7	5.2		6.8
T _{dp}	-2.7	-2.7	-6.2		-4.1
W _d , W _s	CALM	CALM	CALM		CALM
P	25.88	25.88	25.24		26.01
C	E40 ⊕	E40 ⊕	E30 ⊕		E100 ⊕ 180 ⊕
M	no	no	no		no
T _{a25}			6.8		
T _{dp25}			-4.0		
I	8.82	8.82	4.12		7.18
I _a	6.54	6.54	3.56		6.07
I _d	4.24	4.24	2.01		3.66
N					
N _a					
N _b					
N _c					
N _d					
i	3.47	4.55	0.71		1.56
i _a	3.09	3.78	0.60		1.45
i _d	1.79	2.12	0.51		1.09
T _{g/w}	missing	missing	4.8		6.5
T _s	7.5	6.5	5.0		7.2
ψ	22.0	19.6			1.0
ε					
El, Az	19.9 136.3	19.9 136.3	19.5 136.5		20.2 136.1
REMARKS: METSAT III - not operated this date. METSAT I, II IV - Normal Incoming measurements not made due to overcast sky conditions.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 5 January 1977

TIME 1105 (Local) 1805 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	3.6	3.6	5.3		8.4
T _{dp}	-2.0	-2.0	-4.3		-5.6
W _d , W _s	030 2.7	030 2.7	010 5.4		110 1.3
P	25.36	25.86	25.22		25.93
C	E40 ⊕	E40 ⊕	E30 ⊕		E120 ⊕
M	NO	NO	NO		NO
T _{a25}			8.1		
T _{dp25}			-3.4		
I _a	11.87	11.87	8.72		14.15
I _d	9.11	9.11	6.98		11.48
N	5.72	5.72	4.02		6.69
N _a					
N _b					
N _c					
N _d					
i _a	4.70	6.37	1.18		2.81
i _d	4.08	5.16	1.01		2.54
i _d	2.39	2.86	0.91		1.81
T _{g/w}	4.7	4.0	5.4		8.9
T _s	7.0	6.0	6.5		8.2
ψ	22.0	19.6			1.0
ε					
El, Az	32.3 162.1	32.3 162.1	31.7 162.4		32.7 161.9
REMARKS: METSAT I, II, IV - Normal Incoming measurements not made due to overcast sky conditions. METSAT III not operated this date.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 5 January 1977

TIME 1200 (Local) 1900 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	4.9	4.9	6.0		8.4
T _{dp}	-1.9	-1.9	-3.3		-6.9
W _d , W _s	020 2.7	020 2.7	010 3.1		090 3.1
P	25.83	25.83	25.21		25.91
C	E40 ⊕	E40 ⊕	E25 ⊕		E70 ⊕ 120 ⊕
M	NO	NO	NO		NO
T _{a25}			8.0		
T _{dp25}			-2.0		
I	15.65	15.65	10.92		18.06
I _a	11.68	11.68	8.70		14.63
I _d	7.10	7.10	4.98		8.59
N					
N _a					
N _b					
N _c					
N _d					
i	6.83	9.22	1.30		3.75
i _a	5.93	7.56	1.11		3.14
i _d	3.58	4.24	0.91		2.30
T _{g/w}	5.8	5.3	6.3		11.7
T _s	10.5	9.5	7.5		12.0
ψ	22.0	19.6			1.0
ε					
E _l , A _z	34.4 177.1	34.4 177.1	33.8 177.3		34.9 177.0
REMARKS: METSAT III - not operated this date. METSAT I, II, IV - Normal Incoming measurements not made due to overcast sky conditions.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 5 January 1977

RADIOSONDE: (0800 MST) TTAA 55153 72HMS 99873 02051 00000 00143 /////
 85174 06462 16506 70304 02558 21020 50563 18701 23078 40726 25901 24103 30931
 37157 24125 25054 497// 20197 591// 15376 599// 10625 621// 88169 621//
 77280 24140 407//

TTBB 5515/ 72HMS 00873 02051 11862 06663 22820 03860 33803 05461 44594 12713
 55585 11701 66473 20301 77461 19301 88404 24501 99400 25901 11383 22701 22377
 26520 33323 33545 44263 45153 55250 497// 66200 591// 77169 621// 88159 599//
 99150 599// 11132 641// 22115 641// 33107 667// 44104 621// 55100 621// 51515
 10190 11700 02558 11567 11301 11301 SUPER 40-40 26-25

TTCC 55151 72HMS 70844 683// 50053 583// 30380 525// 23031 20640
 567// 18017 10091 487// 05010 88999 77999

TTDD 5515/ 72HMS 11882 605// 22700 683// 33650 589// 44535 621// 55446 545//
 66344 563// 77266 519// 88200 567// 99143 515// 22100 487// 33091 487//

ROCKETSONDE: (1010 MST) RRXX 05171 72269 81010 11101 25553 14003 27555 12011
 30549 12007 31551 14005 32550 18002 35543 34012 36533 36019 37529 01020 38529
 03015 40528 04021 42526 10022 43527 10020 44526 10020 45516 11013 46510 07006
 47514 01010 50513 05007 51512 06008 55522 20009 56522 16005 57523 14002 60532
 30019 61529 30036 64536 31037 65539 32030 66547 34030 67/// 35035 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 6 January 1977

TIME 1317 (Local) 2017 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	8.0	8.0	8.4		10.1
T_{dp}	-2.3	-2.3	-3.5		-1.6
W_d, W_s	360 1.3	360 1.3	360 1.8		120 3.1
P	25.98	25.98	25.40		26.14
C	60 $\textcircled{1}$ 200 $\textcircled{1}$	60 $\textcircled{1}$ 200 $\textcircled{1}$	70 $\textcircled{1}$ 210- $\textcircled{1}$		50 $\textcircled{1}$ 150- $\textcircled{1}$
M	NO	NO	NO		NO
T_{a25}			10.9		
T_{dp25}			-2.7		
I	60.71	60.71	59.20		61.15
I_a	46.52	46.52	52.95		52.98
I_d	30.19	30.19	33.24		31.57
N	94.60	94.60	97.72		99.36
N^a	72.99	72.99	78.81		75.86
N^b	68.07	68.07	74.43		69.22
N^c	55.82	55.82	61.82		58.75
N^d	49.22	49.22	54.12		49.55
i	27.88	38.79	8.88		12.49
i_a	24.35	32.49	7.44		11.00
i_d	16.02	20.23	6.47		8.22
$T_{g/w}$	14.5	18.5	15.0		10.0
T_s	15.0	15.0	10.5		17.0
ψ	21.8	19.4			10.9
ϵ					
El, Az	32.3 198.2	32.3 198.2	31.7 198.2		32.8 198.2
REMARKS: METSAT III - not operated this date.					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N^a = \text{GG495}$, $N^b = \text{OG530}$, $N^c = \text{RG630}$, $N^d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 6 January 1977

RADIOSONDE: (0800 MST) TTAA 56154 72HMS 99878 05139 00000 00197 // // // // //
 85515 01402 36009 70050 09925 29525 50559 19566 26582 40724 24165 26126 30927
 405// 25049 479// 20193 587// 15373 625// 10622 629// 88150 625// // // // 77386
 26130 41559

TTBB 5615/ 72HMS 00878 05139 11868 00634 22863 01417 33856 02026 44804 01356
 55700 09925 66670 11519 77661 11364 88566 16166 99525 20365 11433 21167 22400
 24165 33366 28765 44271 467// 55230 501// 66200 587// 77171 599// 88166 585//
 99150 625// 11129 641// 22120 625// 33107 647// 44105 621// 55100 629// 51515
 10186 11456 21167 11322 36763

TTCC 56151 72HMS 70761 609// // // 50055 555// // // 30382 537// // // 20643
 551// 06013 10088 503// 22013 07321 495// // // 88999 77999

TTDD 5615/ 72HMS 11760 589// 22625 637// 33562 557// 44447 537// 55367 555//
 66274 521// 77181 563// 88100 503// 99070 495//

ROCKETSONDE: (1200 MST) RRXX 06190 72269 81010 11101 25554 11006 27557 10011
 30552 07013 31549 08015 32552 10013 33551 08006 35533 04013 36527 05011 40526
 07015 43523 13017 45515 06011 46510 05017 47506 08014 48502 12015 49000 14014
 50504 17008 51508 32001 55513 10008 56516 11005 58526 14016 59531 13008 60//
 34010 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 13 January 1977

TIME 1248 (Local) 1948 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	4.8	4.8	9.0		
T _{dp}	1.1	1.1	-2.5		
W _d , W _s	110 3.6	110 3.6	CALM		
P	25.89	25.89	25.26		
C	○	○	70 ⊕		
M	YES	YES	YES		
T _{a25}			10.3		
T _{dp25}			-3.0		
I	64.81	64.81	61.30		
I _a	49.95	49.95	50.99		
I _d	32.10	32.10	32.85		
N	93.88	93.88	96.15		
N _a	71.43	71.43	75.83		
N _b	66.87	66.87	71.10		
N _c	54.74	54.74	59.02		
N _d	48.62	48.62	50.96		
i	30.35	39.59	6.63		
i _a	26.58	33.25	5.63		
i _d	16.92	18.22	4.55		
T _{g/w}	12.7	13.1	14.7		
T _s	15.3	15.0	24.5		
ψ	22.3	21.8			
ε					
El, Az	34.9 189.8	34.9 189.8	34.3 189.9		
REMARKS: METSAT III, IV - not operated this date.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 13 January 1977

RADIOSONDE: (0800 MST) TTAA 63151 72HMS 99874 07710 14504 00178 // // // //
85479 00401 01505 70032 05060 30023 50559 22373 24549 40189 34567 24055 30160
437// 24043 25037 505// 25039 20181 547// 25568 15368 50311 24086 10626 625//
26027 88220 547// 25568 77152 24091 43253

TTBB 63151 72HMS 00874 07710 11864 05301 22850 00401 33826 01858 44795 02663
55713 04362 66673 07358 77661 07976 88625 10734 99614 12339 11605 12960 22582
15157 33565 16175 44400 34567 55300 437// 66250 505// 77222 529// 88212 529//
99200 547// 11178 515// 22174 523// 33158 501// 44122 549// 55100 625// 51515
SUPER 63-61

TTCC 65152 72HMS 70841 648// 26514 50048 599// 26519 30374 535// 24502 20637
499// 30528 88999 77999

TTDD 6515/ 72HMS 11853 703// 22780 695// 33666 613// 44562 653// 55416 565//
66412 525// 77338 547// 88168 485//

ROCKETSONDE: (0945 MST) RRXX 13165 72269 81010 11101 25551 16003 30549 16010
33544 17011 35540 23001 37527 32005 40522 35011 42519 36006 43512 20003 45505
26014 46000 28022 47505 28018 48510 28015 50504 30012 52512 02008 55521 04007
58531 13005 60533 09015 61533 10014 62// 13013 63// 22004 65// 31006 // // //
// // // JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 18 January 1977

TIME 0903 (Local) 1603 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	-1.4	-1.4	5.0		5.2
T _{dp}	-5.2	-5.2	1.0		-2.6
W _d , W _s	360 2.2	360 2.2	030 1.3		220 1.3
P	26.37	26.37	25.72		26.35
C	210-⊕	210-⊕	E220 ⊕		200-⊕
M	NO	NO	NO		NO
T _{a25}			7.5		
T _{dp25}			-1.2		
I	32.14	32.14	31.23		35.69
I _a	23.26	23.26	26.22		27.95
I _d	15.36	15.36	16.86		18.56
N	39.38	39.38	69.35		39.21
N _a	31.69	31.69	56.57		29.25
N _b	29.29	29.29	53.59		26.44
N _c	23.65	23.65	44.31		21.07
N _d	21.37	21.37	39.75		15.71
i	14.45	18.43	3.55		8.22
i _a	12.61	15.99	3.12		6.29
i _d	8.36	8.90	2.53		4.23
T _{g/w}	2.9	2.3	3.8		5.5
T _s	3.0	2.0	1.0		12.0
ψ	19.6	19.2			3.3
ε					
E1, Az	19.5 132.5	19.5 132.5	19.1 132.7		19.8 132.3
REMARKS: METSAT III - not operated this date.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 18 January 1977

TIME 0903 (Local) 1603 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	-1.4	-1.4	5.0		5.2
T _{dp}	-5.2	-5.2	1.0		-2.6
W _d , W _s	360 2.2	360 2.2	030 1.3		220 1.3
P	26.37	26.37	25.72		26.35
C	210-⊕	210-⊕	E220 ⊕		200-⊕
M	NO	NO	NO		NO
T _{a25}			7.5		
T _{dp25}			-1.2		
I	32.14	32.14	31.23		35.69
I _a	23.26	23.26	26.22		27.95
I _d	15.36	15.36	16.86		18.56
N	39.38	39.38	69.35		39.21
N _a	31.69	31.69	56.57		29.25
N _b	29.29	29.29	53.59		26.44
N _c	23.65	23.65	44.31		21.07
N _d	21.37	21.37	39.75		15.71
i	14.45	18.43	3.55		8.22
i _a	12.61	15.99	3.12		6.29
i _d	8.36	8.90	2.53		4.23
T _{g/w}	2.9	2.3	3.8		5.5
T _s	3.0	2.0	1.0		12.0
ψ	19.6	19.2			3.3
ε					
El, Az	19.5 132.5	19.5 132.5	19.1 132.7		19.8 132.3
REMARKS: METSAT III - not operated this date.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 18 January 1977

TIME 0923 (Local) 1623 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	-1.4	-1.4	5.0		5.6
T ^{dp}	-5.2	-5.2	-4.8		-3.0
W _d , W _s	060 0.4	060 0.4	CALM		220 2.2
C	26.37	26.37	25.71		26.34
T ^M	210- ()	210- ()	E220 ()		200- (⊕)
T _{a25}	NO	NO	NO		NO
T _{dp25}			7.9		
			-1.4		
I	39.92	29.92	38.70		40.37
I ^a	28.62	28.62	32.41		31.74
I ^d	19.49	19.49	21.17		22.47
N	51.26	51.26	81.96		54.92
N ^a	42.02	42.02	65.15		41.00
N ^b	39.26	39.26	60.77		31.16
N ^c	31.81	31.81	50.79		30.14
N ^d	28.33	28.33	43.26		26.05
i	17.58	23.32	3.69		9.68
i ^a	15.45	20.03	3.02		7.26
i ^d	10.35	11.12	2.53		5.08
T _{g/w}	2.9	2.3	5.6		5.8
T _s	8.0	2.0	1.0		12.0
ψ	19.6	19.2			3.3
ε					
El, Az	22.5 136.3	22.5 136.3	22.1 136.6		22.8 136.1
REMARKS: METSAT III - not operated this date.					

LEGEND

T^a = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW·cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 18 January 1977

TIME 1100 (Local) 1800 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	2.9	2.9	8.9		10.2
T_{dp}	-3.7	-3.7	-6.4		-1.3
W_d, W_s	290 0.4	290 0.4	220 2.7		120 2.7
P	26.37	26.37	25.72		26.33
C	210- (P)	210- (P)	E220 (P)		200- (P)
M	NO	NO	NO		NO
T_{a25}			10.3		
T_{dp25}			-4.0		
I	60.08	60.08	53.93		70.08
I_a	45.87	45.87	41.14		59.48
I_d	29.66	29.66	27.49		37.25
N	73.71	73.71	81.09		74.46
N_a	53.42	53.42	63.40		54.66
N_b	49.82	49.82	60.42		50.83
N_c	42.02	42.02	50.44		41.38
N_d	36.49	36.49	43.43		35.76
i	28.22	37.43	5.09		13.84
i_a	24.35	31.23	4.32		12.09
i_d	15.62	17.06	3.24		9.79
$T_{g/w}$	16.1	14.7	10.3		10.5
T_s	14.5	11.0	19.0		19.0
ψ	19.6	19.2			3.3
ϵ					
El, Az	33.5 158.8	33.5 158.8	33.0 159.1		33.9 158.6

REMARKS: MET SAT III - not operated this date.

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 18 January 1977

RADIOSONDE: (0800 MST) TTAA 68151 72HMS 99887 00759 09002 00298 // // // //
85601 02460 16521 70174 01064 32010 50583 10172 33535 40750 25168 32541 30953
397// 31046 25075 499// 29546 20218 591// 30096 15392 739// 29578 10633 733//
21059 88146 747// 29577 77168 30107 41134

TTBB 6815/ 72HMS 00887 00759 11875 00160 22864 02661 33850 02460 44842 02060
55826 05262 66785 02663 77752 03064 88712 01064 99700 01064 11692 01265 22668
00964 33658 00665 44624 00969 55536 07371 66509 08772 77500 10172 88400 25168
99353 32367 11340 331// 22300 397// 33250 499// 44211 559// 55146 747// 66144
709// 77136 695// 88133 711// 99130 11107 699// 22100 733//

TTCC 68151 72HMS 70841 735// 31539 50039 709// 32542 30349 591// 29547 20610
495// 28048 10073 439// 25028 88999 77999

TTDD 6815/ 72HMS 11946 759// 22766 729// 33700 735// 44576 729// 55500 709//
66402 675// 77300 591// 88254 529// 99214 525// 11200 495// 22141 431// 33100
439// 44074 439// 51515 10190 07313

ROCKETSONDE: (0945 MST) RRXX 18165 72265 81010 11101 25555 28023 27545 27024
28546 26024 30542 23016 32544 24019 33538 26010 35534 35009 37533 05006 38532
06010 40517 06012 42506 06022 43505 05030 45505 04033 47504 04048 48508 03055
50505 03042 51504 02044 52507 02044 55518 02021 56522 01037 57526 01041 58530
01029 59534 36022 60539 35029 61541 35036 62541 34045 63// 34048 64// 33035
65// 29038 66// 29058 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 19 January 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III		METSAT IV	
T _a	8.3		8.3		11.6		11.0		10.3	
T _{dp}	-1.5		-1.5		-4.2		0.4		-1.8	
W _d	240		240		010		210		CALM	
P	26.11		26.11		25.48		25.77		26.09	
C	E220 ⊕		E220 ⊕		E210 ⊕		220- ⊕		220- ⊕	
M	No		No		No		No		No	
T _{a25}					9.8					
T _{dp25}					1.3					
I	48.74		48.74		34.87		59.22		59.41	
I _a	36.01		36.01		27.80		45.07		46.48	
I _d	26.59		26.59		17.91		32.10		33.20	
N	34.81		34.81		28.02		37.09		20.18	
N _a	29.77		29.77		21.02		28.93		17.11	
N _b	20.29		20.29		19.26		25.05		15.33	
N _c	16.57		16.57		17.51		16.31		12.77	
N _d	15.61		15.61		12.26		13.20		12.90	
i	29.45		30.60		2.72		3.20		10.82	
i _a	23.86		26.32		2.31		2.88		8.83	
i _d	14.63		15.06		1.92		1.41		6.77	
T _{g/w}	15.0		13.4		13.5		5.5		12.3	
T _s	9.0		10.0		17.0		5.9		12.0	
ε	19.3		18.9						1.9	
El, Az	36.5	175.5	36.5	175.5	35.9	175.7	36.1	174.5	37.0	175.3
REMARKS:										

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 19 January 1977 TIME 1238 (Local) 1938 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	8.3	8.3	12.8	11.0	11.5
T _{dp}	-1.5	-1.5	-5.5	0.6	-2.9
W _d , W _s	240 5.8	240 5.8	010 0.4	210 0.4	CALM
P	26.10	26.10	25.48	25.74	26.06
C	E220 ⊕	E220 ⊕	E210 ⊕	E220 ⊕	220-⊕
M	No	No	No	No	No
T _{a25}			9.5		
T _{dp25}			-3.3		
I	54.94	54.94	40.23	48.88	81.39
I _a	44.48	44.48	31.49	37.31	69.34
I _d	28.92	28.92	20.21	26.44	45.95
N	9.12	9.12	9.81	27.18	87.36
N _a	6.64	6.64	8.06	21.94	65.26
N _b	5.52	5.52	7.38	18.45	59.90
N _c	3.36	3.36	6.65	14.95	48.91
N _d	2.52	2.52	5.33	10.10	39.72
i	25.76	32.42	3.43	2.72	16.02
i _a	22.50	27.33	3.12	2.40	13.06
i _d	14.63	16.08	2.33	1.31	10.16
T _{g/w}	15.0	13.4	15.0	5.7	15.5
T _s	9.0	10.0	17.0	6.0	16.0
ψ	19.3	18.9			1.9
ε					
E1, Az	36.3 186.5	36.3 186.5	35.7 186.6	36.1 185.5	36.9 186.5
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 19 January 1977

RADIOSONDE: (0800 MST) TTAA 69151 72HMS 99880 03161 00000 00237 /////
 85541 05263 25008 70133 06074 34015 50580 12572 30011 40746 24569 29030 30949
 407// 28537 25071 497// 28570 20213 617// 29077 15385 739// 28567 10625 721//
 29545 88152 747// 29068 77309 28586 43915

TTBB 6915/ 72HMS 00880 03161 11870 00358 22864 03861 33850 05263 44835 04665
 55800 07872 66676 05475 77643 02476 88500 12572 99400 24569 11352 31768 22302
 411// 33250 497// 44200 617// 55162 737// 66152 747// 77135 681// 88119 715//
 99100 721//

TTCC 69151 72HMS 70836 773// 30534 50033 721// 32032 30341 639// 30535 20598
 507// 26543 10061 453// 23066 88999 77999

TTDD 6915/ 72HMS 11700 773// 22606 747// 33572 689// 44550 721// 55478 699//
 66426 711// 77392 655// 88300 639// 99270 655// 11200 507// 22150 543// 33137
 409// 44100 453// 55086 463// 51515 10190 07297

ROCKETSONDE: (1315 MST) RRXX 19202 72269 81010 63101 25554 28025 28544 25017
 30540 21023 31543 22021 33539 31005 35538 11003 37529 08005 38525 11008 40506
 13007 43501 04016 45003 03015 46002 02014 47501 02010 48502 01006 50503 29009
 51506 30018 53514 28021 55521 30015 56522 30011 58522 ///// 60528 ///// 61533
 ///// JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 21 January 1977

TIME 0904 (Local) 1604 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	5.4	5.4	7.2		
T _{dp}	-2.7	-2.7	-5.6		
W _d , W _s	310 2.7	310 2.7	360 6.3		
P	26.13	26.13	25.52		
C	50⊕E140⊕230⊕	50⊕E140⊕230⊕	E150⊕ 220⊕		
M	NO	NO	NO		
T _{a25}			8.9		
T _{dp25}			-0.7		
I	24.89	24.89	19.25		
I _a	18.65	18.65	14.76		
I _d	11.76	11.76	9.29		
N					
N _a					
N _b					
N _c					
N _d					
i	10.75	14.68	1.78		
i _a	9.27	12.22	1.61		
i _d	5.87	7.02	1.21		
T _{g/w}	5.0	5.3	8.0		
T _s	8.9	8.0	8.0		
ψ	21.2	20.6			
ε					
El, Az	19.9 132.0	19.9 132.0	19.6 132.3		
REMARKS: METSAT III, IV - not operated this date. METSAT I, II - Normal Incoming measurements not made due to overcast sky conditions.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 2nd meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 21 January 1977

RADIOSONDE: (0800 MST) TTAA 71151 72HMS 99881 00256 00000 00216 /////
 85550 07463 09005 70121 01659 18508 50575 13561 23517 40742 25728 22035 30944
 423// 23540 25064 537// 23058 20205 651// 23576 15381 627// 24541 10627 693//
 25543 88200 651// 23576 77202 23578 41528

TTBB 7115/ 72HMS 00881 00256 11871 04259 22862 04660 33850 07463 44829 07263
 55788 04662 66746 04466 77707 02464 88700 01659 99688 00644 11659 02505 22601
 07301 33587 05960 44559 08746 55543 10150 66533 10961 77520 12159 88518 12146
 99517 12155 11500 13561 22487 14756 33480 15759 44458 18158 55427 22540 66407
 24930 77400 25728 88370 30516 99346 33159 11311 39961 22300 423// 33250 537//
 44200 651// 55173 659// 66161 623// 77150 627// 88146 617// 99129 651// 11100
 693//

TTCC 71152 72HMS 70840 673// 34029 50041 695// 27531 30350 645// 29027 20608
 519// 25543 88999 77999

TTDD 7115/ 72HMS 11888 711// 22700 673// 33500 695// 44300 645// 55258 547//
 66218 539// 77200 519// 88162 485// 99147 439// 11124 437// 51515 10190 10070

ROCKETSONDE: (0900 MST) RRXX 21160 72269 81010 11101 25559 26020 28545 25019
 30544 21016 31544 21017 32542 23014 33536 31005 34541 02007 35535 02005 36533
 06004 40513 30004 41512 32002 42514 31003 45507 30023 50510 28038 54518 28025
 55521 28029 60533 26034 61537 25037 62541 25050 63545 26061 65553 27047 66///
 26059 67/// 26085 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 25 January, 1977

TIME 1130 (Local) 1830 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	5.8	5.8	10.2		10.1
T _{dp}	-0.3	-0.3	-0.8		-1.2
W _d , W _s	CALM	CALM	230 1.3		CALM
P	25.94	25.94	25.42		26.06
C	210-⊕	210-⊕	250-⊖		250-⊖
M	NO	NO	NO		NO
T _{a25}			10.5		
T _{dp25}			-5.3		
I	67.12	67.12	62.94		72.91
I _a	50.91	50.91	55.34		61.43
I _d	33.58	33.58	35.25		37.88
N	91.84	91.84	97.20		96.81
N _a	70.23	70.23	76.18		72.54
N _b	65.55	65.55	70.40		66.92
N _c	53.90	53.90	59.02		55.04
N _d	47.54	47.54	51.66		48.15
i	28.22	35.49	7.81		13.94
i _a	26.70	29.85	6.03		12.33
i _d	15.92	17.33	4.95		9.31
T _{g/w}	19.0	12.5	21.0		20.0
T _s	17.0	12.0	23.0		15.0
ψ	20.5	19.7			1.7
ε					
Ei, Az	36.7 166.1	36.7 166.1	36.2 166.3		37.2 165.9
REMARKS: METSAT III - not operated this date.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 25 January 1977

TIME 1228 (Local) 1928 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	7.4	7.4	10.8		12.2
T _{dp}	1.0	1.0	-0.2		-0.4
W _d	030	030	250		CALM
W _s	1.8	1.8	2.2		26.02
P	26.02	26.02	25.42		200
C	210-⊕	210-⊕	E250⊕		250-⊕
M	NO	NO	NO		NO
T _{a25}			11.5		
T _{dp25}			-3.7		
I	72.16	72.16	65.87		72.14
I _a	53.16	53.16	55.73		62.62
I _d	33.05	33.05	36.11		37.25
N	78.51	78.51	96.50		97.06
N _a	60.62	60.62	76.01		71.26
N _b	57.50	57.50	68.83		65.13
N _c	48.50	48.50	57.09		53.64
N _d	44.30	44.30	50.26		45.85
i	31.24	39.14	8.52		14.78
i _a	28.68	32.87	6.13		12.21
i _d	17.71	19.14	5.26		9.43
T _{g/w}	21.0	14.5	17.0		20.0
T _s	18.0	13.0	25.0		17.0
ψ	20.5	19.7			1.7
ε					
El, Az	37.9 183.2	37.9 183.2	37.3 183.4		38.4 183.2
REMARKS: METSAT III - not operated this date.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 25 January 1977

RADIOSONDE: (0800 MST) TTAA 75152 72HMS 99880 03516 00000 00222 /////
 85535 03056 16505 70094 03172 25513 50571 18168 28035 40735 26563 28564 30937
 417// 27582 25058 509// 27612 20200 623// 27616 15374 625// 10623 665// 88165
 695// 27123 77263 27126 42416

TTBB 7515/ 72HMS 00880 03516 11869 00236 22850 03056 33830 04059 44767 00756
 55761 00762 66751 00768 77700 03172 88656 02373 99609 05970 11500 18168 22455
 23368 33433 23568 44400 26566 55365 30764 66321 38361 77200 623// 88165 695//
 99158 699// 11149 615// 22100 665//

TTCC 7515/ 72HMS 70839 641// 50044 645// 88999 77999

TTDD 7515/ 72HMS 11866 673// 22808 655// 33700 669// 44570 641// 55500 645//
 66354 633// 77344 613// 10190 30359

ROCKETSONDE: No observation this date.

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 26 January 1977

TIME 0920 (Local) 1620 (GMT)

PARAMETER	METSAT 1-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	3.1	3.1	7.9	3.0	7.1
T _{dp}	-1.5	-1.5	-5.6	-3.6	-2.6
W _d , W _s	350 2.7	350 2.7	040 1.3	030 2.7	CALM
P	25.99	25.99	25.35	25.64	25.95
C	220-⊙	220-⊙	150-⊙	220⊙	○
M	NO	NO	NO	NO	NO
T _{a25}			9.8		
T _{dp25}			-4.8		
I	43.38	43.38	37.16	41.34	42.22
I _a	31.83	31.83	32.94	31.94	33.37
I _d	20.97	20.97	21.36	23.33	22.73
N	87.88	87.88	86.69	82.52	89.40
N _a	69.27	69.27	70.05	64.27	67.69
N _b	65.19	65.19	65.67	59.42	63.73
N _c	54.62	54.62	54.99	50.10	51.85
N _d	47.90	47.90	47.46	42.14	45.85
i	18.48	22.98	4.85	4.56	8.64
i _a	16.44	19.77	3.62	3.74	8.10
i _d	10.65	11.66	3.24	2.41	6.29
T _{g/w}	6.0	8.5	9.0	5.3	Missing
T _s	5.5	3.5	9.0		Missing
ψ	23.4	19.9			
ε					
El, Az	23.1 134.1	23.1 134.1	22.7 134.3	22.3 133.5	23.4 133.8
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 26 January 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	11.0	11.0	12.4	9.2	11.6
T _{dp}	-3.5	-3.5	-5.6	0.1	-1.3
W _d , W _s	360 2.2	360 2.2	210 2.2	220 1.3	CALM
P	25.95	25.95	25.35	25.59	25.91
C	220-⊙	220-⊙	150⊙	220⊙	300-⊙
M	NO	NO	NO	NO	NO
T _{a25}			12.2		
T _{dp25}			-5.9		
I	70.17	70.17	66.33	67.60	71.27
I _a	54.02	54.02	55.99	49.55	59.70
I _d	35.06	35.06	35.34	35.80	36.74
N	97.60	97.60	98.25	89.71	84.16
N _a	74.79	74.79	77.23	67.18	63.86
N _b	67.75	67.75	72.33	61.75	59.00
N _c	57.86	57.86	59.89	50.68	53.51
N _d	50.54	50.54	52.54	42.14	47.25
i	30.57	39.02	7.93	3.78	14.26
i _a	27.19	33.00	6.13	3.35	12.58
i _d	17.31	19.48	5.06	1.61	9.19
T _{g/w}	18.1	19.9	25.0		27.3
T _s	16.7	18.0	23.0		15.2
ψ	23.4	19.9			1.8
ε					
El, Az	38.0 174.8	38.0 174.8	37.4 175.0	37.6 173.7	32.5 174.6

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 26 January 1977

RADIOSONDE: (1000 MST) TTAA 76171 72HMS 99876 09464 34009 00154 /////
 85505 07064 36017 70074 02172 30020 50568 17159 29034 40731 30758 29037 30825
 449// 27545 25049 495// 27572 20195 491// 27095 15381 585// 28118 10629 683//
 26580 88268 511// 28057 77186 27124 44215

TTBB 7617/ 72HMS 00876 09464 11850 07064 22753 00260 33740 00465 44700 02172
 55693 02173 66675 01968 77673 02172 88664 02965 99657 03375 11586 09758 22543
 11959 33500 17159 44429 26556 55400 30758 66330 40959 77300 463// 88268 511//
 99258 495// 11250 495// 22229 525// 33224 483// 44200 491// 55184 495// 66150
 585// 77125 645// 88113 651// 99104 687// 11100 683// 51515 SUPER 68-67

TTCC 76171 72HMS 70842 711// 29540 50043 639// 28554 30360 561// 27035 20627
 465// 25543 10090 455// 22012 07330 409// 88999 77999

TTDD 7617/ 72HMS 11954 667// 22764 715// 33560 685// 44500 639// 55444 637//
 66421 583// 77317 637// 88300 561// 99220 435// 11200 465// 22268 427// 33131
 471// 44124 445// 55109 479// 66100 455// 77081 419// 88075 433// 99070 409//

ROCKETSONDE: (1347 MST) RRXX 26205 72269 81010 63101 25548 26024 26545 25022
 28543 26010 29546 23005 30549 23008 31549 25010 32542 26011 34534 31013 35535
 30010 40526 26018 41517 25026 42514 26034 43516 27037 45508 26044 46505 25048
 47501 26051 48001 25053 50509 25061 55517 27056 57522 27063 58522 27065 60521
 27089 61522 28091 62526 29081 63531 28081 65/// 27103 70/// 26122 71/// 26121
 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 3 February 1977 TIME 0916 (Local) 1616 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	0.7	0.7	1.4		4.0
T _{dp}	-0.6	-0.6	-2.7		-2.5
W _d , W _s	360 3.6	360 3.6	040 3.6		340 2.2
P	26.18	26.18	25.52		26.10
C	○	○	○		○
M	YES	YES	YES		YES
T _{a25}					
T _{dp25}					
I	45.17	45.17	39.82		50.49
I _a	33.33	33.33	36.50		41.82
I _d	21.72	21.72	24.23		27.53
N	86.07	86.07			86.46
N _a	68.19	68.19			65.77
N _b	64.11	64.11			61.17
N _c	54.14	54.14			52.36
N _d	47.66	47.66			44.06
i	18.59	22.41	7.22		9.89
i _a	17.43	19.02	5.63		9.07
i _d	10.65	10.49	5.26		7.13
T _{g/w}	6.0	5.0	4.5		0.4
T _s	4.1	2.0	4.0		3.8
ψ	23.8	25.6			2.0
ε					
El, Az	23.9 131.5	23.9 131.5	23.6 131.8		24.2 131.2
REMARKS: METSAT III - not operated this date. METSAT II - no Normal Incoming data available this date.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 3 February 1977

TIME 0945 (Local) 1645 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	2.0	2.0	2.2		4.8
T ^{dp}	-0.3	-0.3	-2.7		-2.4
W ^d , W ^s	10 3.1	10 3.1	040 3.1		330 1.8
P	26.19	26.19	25.53		26.10
C	○	○	○		○
M	YES	YES	YES		YES
T ^a ₂₅					
T ^{dp} ₂₅					
I	53.78	53.78	48.62		59.74
I ^a	40.09	40.09	43.48		48.86
I ^d	25.85	25.85	28.83		32.20
N	89.56	89.56			91.70
N ^a	70.23	70.23			69.48
N ^b	66.03	66.03			64.37
N ^c	55.58	55.58			54.79
N ^d	49.10	49.10			46.49
i	21.72	26.51	8.28		11.79
i ^a	19.90	22.42	6.63		10.64
i ^d	12.34	12.39	6.07		8.22
T ^{g/w}	6.0	5.0	7.4		0.4
T ^s	4.1	2.0	5.0		8.7
ψ	23.8	25.6			2.0
ε					
El, Az	28.2 137.5	28.2 137.5	27.9 137.8		28.6 137.2
REMARKS: METSAT III - not operated this date. METSAT II - no Normal Incoming data available this date.					

LEGEND

T = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W^d, W^s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T^a₂₅, T^{dp}₂₅ = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T^{g/w} = Soil or Water Temperature (°C); T^s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 3 February 1977

RADIOSONDE: (0800 MST) TTAA 53151 72HMS 99882 01502 00000 00241 /////
 85549 01117 12506 70084 06558 30511 50563 22169 29041 40725 26168 28071 30927
 425// 28091 25048 521// 27592 20191 565// 27595 15374 603// 28081 10622 633//
 27555 88227 27600 555// 77224 27601 41111

TTBB 53151 72HMS 00882 01502 11834 01127 22771 02957 33700 06558 44671 08567
 55623 12769 66588 14370 77420 30967 88400 26168 99320 38911 11300 425// 22274
 481// 33227 555// 44193 567// 55189 545// 66169 555// 77130 641// 88100 633//
 51515 10186 11536 181//

TTCC 53155 72HMS 70840 661// 29528 50043 667// 30516 88999 77999

TTDD 5315/ 72HMS 11886 655// 22454 659// 33388 601// 44343 611// 51515 10186
 //554 675// 10190 30359

ROCKETSONDE: (1000 MST) RRXX 03170 72269 81010 13101 25558 27019 30541 26031
 35536 27039 37521 27030 39507 25019 40507 23015 41511 24013 44502 27012 45505
 26010 46509 28014 47506 27015 48510 24012 49515 20027 50516 22029 52516 24030
 54522 24040 55517 25045 58521 26048 59524 26048 60522 27062 61522 27074 62526
 27075 63526 27095 64/// 27111 65/// 27114 66/// 27118 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 8 February 1977

TIME 0805 (Local) 1605 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	-1.0	-1.0			3.6
T ^{dp}	-3.9	-3.9			-0.9
W _d , W _s	220 1.8	220 1.8			CALM
P	26.19	26.19			26.12
C	○	○			○
T ^M _{a25}	YES	YES			YES
T ^{dp} ₂₅					
I	44.33	44.33			39.83
I ^a	33.23	33.23			32.39
I ^d	21.08	21.08			22.10
N	83.19	83.19			83.01
N ^a	65.19	65.19			63.73
N ^b	61.58	61.58			59.77
N ^c	51.98	51.98			51.34
N ^d	45.98	45.98			43.81
i	19.00	22.64			8.22
i ^a	16.44	19.27			7.50
i ^d	10.85	10.91			5.93
T _{g/w}	4.0	4.5			10.2
T _s	3.8	2.5			9.0
ψ	21.9	16.3			1.8
ε					
E1, Az	23.1 128.1	23.1 128.1			23.4 127.9
REMARKS: METSAT II, III - not operated this date.					

LEGEND

T^a = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)

ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 8 February 1977

TIME 0908 (Local) 1608 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	-1.0 -3.9 220 1.8 26.19 () YES	-1.0 -3.9 220 1.8 26.19 ○ YES			3.6 -0.9 CALM 26.12 ○ YES
I I_a I_d N N_a N_b N_c N_d i i_a i_d	46.64 35.48 23.41 84.51 66.03 62.06 52.46 45.98 19.91 17.31 11.14	46.64 35.48 23.41 84.51 66.03 62.06 52.46 45.98 23.66 20.16 11.12			41.46 33.69 22.60 85.44 66.28 62.07 53.00 45.47 8.64 7.74 6.05
$T_{g/w}$ T_s ψ ϵ El, Az	4.0 3.8 21.9 23.6 128.7	4.5 2.5 16.3 23.6 128.7			10.2 9.0 1.8 23.9 128.5
REMARKS: METSAT II, III - not operated this date.					

LEGEND

T_a = Air Temperature ($^{\circ}C$); T_{dp} = Dew Point Temperature ($^{\circ}C$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}C$), Dew Point Temperature ($^{\circ}C$) at 25 meter height.

Radiant Flux: Global Incoming: $I = WG280, I_a = GG495, I_d = RG695$
 Normal Incoming: $N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695$
 Global Outgoing: $i = WG280, i_a = GG495, i_b = RG695$
 (Units: milliwatts per square centimeter [$mW\ cm^{-2}$])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}C$); T_s = Surface Temperature ($^{\circ}C$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE OF OBSERVATION 8 February 1977 SATELLITE IDENTIFICATION NOAA V TIME 0929 (Local) 1629 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	-0.1	-0.1			4.5
T _{dp}	-3.0	-3.0			-0.7
W _d	210	210			CALM
W _s	1.3	1.3			26.11
C	26.20	26.20			YES
T _{a25}	YES	YES			
T _{dp25}					
I	51.89	51.89			47.66
I _a	37.41	37.41			38.14
I _d	25.85	25.85			25.76
N	87.39	87.39			88.89
N _a	67.71	67.71			69.60
N _b	63.99	63.99			63.86
N _c	53.78	53.78			54.15
N _d	47.30	47.30			47.51
i	21.84	25.94			9.99
i _a	18.91	22.04			8.83
i _d	12.34	12.29			6.77
T _{g/w}	4.0	4.5			16.4
T _s	3.8	2.5			9.8
ε	21.9	16.3			1.8
El, Az	27.0 132.9	27.0 132.9			27.3 128.5

REMARKS: METSAT II, III - not operated this date.

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.
 Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
 Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
 Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
 (Units: milliwatts per square centimeter [mW cm⁻²])
 T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).
 ψ = Soil Moisture (%)

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 8 February 1977

RADIOSONDE: (0800 MST) TTAA 58151 72HMS 99882 01356 00000 00245 /////
 85555 04257 00502 70144 03968 02006 50571 22767 04518 40730 355// 05017 30926
 455// 29048 25045 531// 29060 20187 569// 28055 15370 565// 28046 10624 665//
 27027 88226 571// 29049 77255 28062 41312

TTBB 5815/ 72HMS 00882 01356 11872 02256 22864 05457 33820 04259 44788 01459
 55769 01265 66704 04566 77658 05574 88572 15570 99428 32967 11400 355// 22235
 563// 33212 547// 44191 489// 55174 551// 66127 565// 77100 665// 51515 10186
 //226 571//

TTCC 58155 72HMS 70838 679// 28023 50042 635// 28010 88999 77999

TTDD 5815/ 72HMS 11838 685// 22404 619//

ROCKETSONDE: (1110 MST) RRXX 08181 72269 81010 13101 25555 27013 26555 26017
 30542 25027 32540 26031 35530 26021 37522 26013 39508 24010 40508 26008 45506
 24004 47507 27005 50516 25012 51519 22015 55514 23036 57522 27035 58526 26038
 60521 26046 61518 26068 62515 25084 65/// 26090 66/// 27091 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 9 February 1977

TIME 1137 (Local) 1837 (GMT)

PARA-METER	METSAT 1-A		METSAT 1-B		METSAT II		METSAT III		METSAT IV	
T_a	8.0		8.0		12.6		10.0		13.5	
T_{dp}	-1.1		-1.1		-7.1		-2.0		-3.9	
W_d	320	1.3	320	1.3	210	1.8	220	0.4	230	1.8
P	25.97		25.97		25.42		25.67		26.00	
C	☉		☉		☉		250-☉		150-☉	
M	NO		NO		NO		NO		NO	
T_{a25}					12.0					
T_{dp25}					-4.5					
I	75.11		75.11		71.19		70.67		74.76	
I_a	58.20		58.20		59.55		53.28		62.84	
I_d	39.94		39.94		38.03		37.64		40.03	
N	97.96		97.96				90.68		98.08	
N_a	75.03		75.03				67.57		75.22	
N_b	70.11		70.11				62.14		69.22	
N_c	58.46		58.46				52.04		57.98	
N_d	51.14		51.14				43.88		51.09	
i	32.47		41.64		7.34		4.27		15.61	
i_a	28.55		35.01		5.63		3.65		13.78	
i_d	18.01		19.49		4.55		1.91		10.52	
$T_{g/w}$	missing		missing		23.0		6.4		18.0	
T_s	missing		missing		32.0				21.0	
ψ	16.8		16.2						3.0	
ϵ										
El, Az	41.1 166.4		41.1 166.4		40.5 166.7		40.6 165.3		41.6 166.1	
REMARKS: METSAT II - no Normal Incoming data available this date.										

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 9 February 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A			METSAT I-B			METSAT II			METSAT III			METSAT IV		
T ^a	8.0			8.0			12.8			11.0			14.6		
T _{dp}	-1.1			-1.1			-5.4			-0.5			-2.2		
W _d W _s	330 1.3			330 1.3			200 2.7			220 0.4			CALM		
P	25.97			25.97			25.42			25.64			25.98		
C	○			○			○			250-①			150-①		
M	NO			NO			NO			NO			NO		
T _{a25}							12.4								
T _{dp25}							-4.1								
I	76.37			76.37			73.30			72.07			76.61		
I ^a	59.38			59.38			61.13			54.48			64.90		
I ^d	40.15			40.15			38.98			38.80			39.90		
N	98.32			98.32						90.29			99.23		
N ^a	75.27			75.27						67.18			75.22		
N ^b	70.23			70.23						61.75			70.11		
N ^c	58.34			58.34						51.46			58.24		
N ^d	51.02			51.02						43.30			51.09		
i	32.92			42.43			7.69			2.33			15.71		
i ^a	28.92			35.64			5.83			2.12			13.66		
i ^d	18.91			19.60			4.75			1.51			10.40		
T _{g/w}	MISSING			MISSING			24.0			6.4			18.0		
T _s	MISSING			MISSING			33.0						24.0		
ε	16.8			16.2									3.0		
Ei, Az	41.9	173.7		41.9	173.7		41.4	173.9		41.5	172.6		42.4	173.5	

REMARKS: METSAT II - no Normal Incoming data available this date.

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OGS30, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%)
ε = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 9 February 1977

TIME 1250 (Local) 1950 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	9.5	9.5	14.4	12.5	16.7
T _{dp}	-0.4	-0.4	-5.4	1.6	-1.0
W _d , W _s	060 1.8	060 1.8	180 4.5	270 1.3	150 3.6
P	25.97	25.97	25.35	25.61	25.93
C	210 (C)	210 (C)	C	250 (C)	150 (C)
M	NO	NO	NO	NO	NO
T _{a25}			13.0		
T _{dp25}			-4.8		
I	76.16	76.16	72.94	66.48	76.39
I ^a	57.34	57.34	60.61	51.04	65.66
I ^d	38.67	38.67	38.79	36.84	40.15
N	97.36	97.36		88.54	98.08
N ^a	74.31	74.31		65.63	74.84
N ^b	69.51	69.51		60.19	68.71
N ^c	57.62	57.62		49.32	57.73
N ^d	50.54	50.54		41.75	50.70
i	32.92	42.43	7.69	3.69	16.13
i ^a	28.92	35.01	5.83	2.98	14.51
i ^d	18.21	19.60	4.85	1.51	11.00
T _{g/w}	MISSING	MISSING	26.0	6.6	19.0
T _s	MISSING	MISSING	37.0		26.0
ε	16.8	16.2			3.0
Ei, Az	41.6 189.9	41.6 189.9	41.0 190.0	41.4 188.7	42.1 189.9
REMARKS: METSAT II - no Normal Incoming data available this date.					

LEGEND

T^a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ε = Soil Moisture (%)
ε = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 9 February 1977

RADIOSONDE: (0800 MST) TTAA 59151 72HMS 99878 05762 07002 00187 // // // //
 85519 05064 16506 70086 01575 16002 50567 21965 11013 40728 33566 09523 30924
 483// 22512 25042 559// 30520 20182 583// 29534 15362 585// 28027 10617 601//
 28022 88208 607// 30021 77;72 29047 41911

TTBB 5915/ 72HMS 00878 05762 11868 01458 22850 05064 33831 06465 44749 00764
 55720 00773 66607 08371 77500 21965 88400 33566 99300 483// 11227 595// 22208
 607// 33200 583// 44159 609// 55150 585// 66100 601// 51515 10186 //700 01575

TTCC 59152 72HMS 70837 635// 30015 50045 615// 29509 30365 555// 28511 20625
 521// 28033 88999 77999

TTDD 72HMS 11846 639// 22744 615// 33436 615// 44238 547// 55160 467// 66108
 437// 51515 10190 10086

ROCKETSONDE: (1213 MST) RRXX 09191 72269 81010 13101 24/// 28008 25553 27012
 30545 26026 31542 26031 32539 26034 35527 28020 36518 27012 40510 19010 42506
 09003 45510 12002 50512 24021 55519 27025 56523 26024 57520 24027 58520 25030
 59523 27040 60/// 29059 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION: 15 February 1977

TIME 1102 (Local) 1802 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III	METSAT IV	
T _a	6.0		6.0		9.0			8.4	
T _{dp}	-0.8		-0.8		-2.9			-2.5	
W _d	140	2.7	140	2.7	220	1.8		CALM	
P	26.25		26.25		25.59			26.18	
C	○		○		220-(j)				
M	NO		NO		NO			NO	
T _{a25}					11.5				
T _{dp25}					-2.3				
I	74.05		74.05		69.45			68.55	
I _a	56.16		56.16		58.10			55.58	
I _d	36.12		36.12		36.78			35.61	
N	94.36		94.36		98.87			97.06	
N _a	71.55		71.55		76.36			73.82	
N _b	66.99		66.99		71.48			67.69	
N _c	55.34		55.34		58.72			57.09	
N _d	48.26		48.26		50.28			49.94	
i	34.60		44.71		7.22			16.23	
i _a	29.91		37.03		5.23			14.39	
i _d	19.20		20.23		4.04			11.25	
T _{g/w}	16.1		14.5		20.3			16.7	
T _s	16.1		14.1		22.0			21.0	
ψ	19.8		19.7					0.9	
ε									
Ei, Az	40.6	154.8	40.6	154.8	40.0	155.2		41.0	154.5
REMARKS: METSAT III - not operated this date.									

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 15 February 1977

TIME 1240 (Local) 1940 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III	METSAT IV	
T ^a	9.1		9.1		11.3			12.8	
T _{dp} ^a	-5.7		-5.7		-2.1			-2.4	
W _d ^a , W _s ^a	120	3.1	120	3.1	220	4.9		210	2.7
P	26.21		26.21		25.55			26.14	
C	210-(210-(220-(210-(
M	NO		NO		NO			NO	
T _{a25}					12.7				
T _{dp25}					-1.6				
I	79.94		79.94		75.87			73.23	
I ^a	61.03		61.03		63.37			62.62	
I _d	39.62		39.62		40.52			38.01	
N	96.88		96.88		99.81			99.62	
N ^a	73.23		73.23		77.11			75.35	
N ^b	68.31		68.31		71.48			69.22	
N ^c	56.30		56.30		58.72			58.11	
N _d	48.98		48.98		50.28			50.83	
i	39.53		49.72		8.05			17.27	
i ^a	34.24		41.18		6.23			15.36	
i _d	22.09		22.35		5.16			11.97	
T _{g/w}	17.1		19.9		24.5			22.7	
T _s	23.0		18.7		28.0			26.5	
ψ	19.8		19.7					0.9	
c									
El, Az	43.9	186.9	43.9	186.9	43.3	187.1		44.4	186.0
REMARKS: METSAT III - not operated this date.									

LEGEND

T^a = Air Temperature (°C); T_{dp}^a = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 15 February 1977

RADIOSONDE: (0800 MST) TTAA 65151 72HMS 99883 03356 19004 00254 /////
 85570 02657 27004 70115 05763 35031 50569 19563 35554 40731 32163 35566 30927
 481// 36071 25045 575// 02589 20183 649// 00580 15360 611// 31528 10612 613//
 29034 88179 671// 35070 77264 02593 44226

TTBB 6515/ 72HMS 00883 03356 11873 00256 22850 02657 33814 00750 44751 03723 38
 55738 04126 66721 04550 77712 04759 88700 05763 99672 06366 11585 13166 22572
 11966 33537 14569 44500 19563 55400 32163 66353 40160 77250 575// 88214 639//
 99179 671// 11171 591// 22109 631// 33100 613//

TTCC 65151 72HMS 70832 647// 30022 50040 619// 28507 30362 563// 29019 20622
 497// 26541 10087 361// 25023 88999 77999

TTDD 6515/ 72HMS 11756 611// 22700 647// 33628 645// 44590 587// 55500 619//
 66462 589// 77432 607// 88348 547// 99250 561// 11214 485// 22156 485// 33108
 365// 44100 361// 55079 351// 51515 10190 07335

ROCKETSONDE: (1200 MST) RRXX 15190 72269 81010 13101 24556 26011 25552 26015
 29546 26019 30540 26017 33539 24016 35532 27013 37519 23014 38519 22016 40514
 26013 41514 29007 42509 00004 43509 08002 45508 19020 47503 23024 50504 21023
 51502 21022 52500 21022 53501 25017 55511 28026 56516 27031 57// 26037 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 16 February 1977

TIME 0928 (Local) 1628 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III		METSAT IV	
T _a	2.5		2.5		10.1		4.8		6.7	
T _{dp}	-4.0		-4.0		-4.8		-1.8		-3.9	
W _d , W _s	080	2.2	080	2.2	170	0.9	CALM		CALM	
P	26.23		26.23		25.55		25.85		26.16	
C	220- \odot		220- \odot		220- \odot		230- \odot		250- \odot	
M	NO		NO		NO		NO		NO	
T _{a25}					11.2					
T _{dp25}					-5.9					
I	58.19		58.19		50.73		50.14		48.97	
I _a	42.34		42.34		41.63		37.16		38.68	
I _d	27.97		27.97		27.39		27.14		26.14	
N	90.04		90.04		90.99		87.77		94.76	
N _a	67.71		67.71		71.29		66.80		73.18	
N _b	63.75		63.75		67.17		61.17		67.18	
N _c	53.30		53.30		55.91		50.87		58.83	
N _d	46.46		46.46		48.03		42.52		49.81	
i	25.64		33.11		4.97		3.59		11.97	
i _a	22.50		27.83		3.72		2.98		10.88	
i _d	14.63		15.47		3.13		1.21		8.46	
T _{g/w}	6.2		9.8		12.0		7.0		10.0	
T _s	6.8		6.4		18.0				10.2	
ψ	19.3		20.4						0.7	
e										
E _l , Az	28.8	130.8	28.8	130.8	28.5	131.1	28.0	130.2	29.1	130.5
REMARKS:										

LEGEND

T_a = Air Temperature ($^{\circ}$ C); T_{dp} = Dew Point Temperature ($^{\circ}$ C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}$ C), Dew Point Temperature ($^{\circ}$ C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

T_{g/w} = Soil or Water Temperature ($^{\circ}$ C); T_s = Surface Temperature ($^{\circ}$ C); ψ = Soil Moisture (%)
e = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 16 February 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT 1-A		METSAT 1-B		METSAT 11		METSAT 111		METSAT IV	
T ^a	9.5		9.5		15.7		12.3		14.1	
T _{dp} ^a	-1.8		-1.8		-5.9		1.5		-2.1	
W _d ^s	290	2.2	290	2.2	270	1.3	CALM		050	1.8
P	26.20		26.20		25.55		25.84		26.14	
C	220-(D)		220-(D)		220-(D)		230-(D)		250-(D)	
T _{a25}	NO		NO		NO		NO		NO	
T _{dp25}					14.3					
	-1.5									
I	80.67		80.67		75.78		75.84		73.88	
I ^a	63.67		63.67		63.64		56.72		61.76	
I _d	40.68		40.68		40.61		40.42		38.38	
N	99.04		99.04		102.44		88.16		102.04	
N ^a	73.47		73.47		79.17		65.05		77.01	
N _b	68.79		68.79		72.98		59.81		70.37	
N ^c	57.02		57.02		61.54		48.54		59.00	
N _d	49.46		49.46		52.16		41.75		51.60	
i	38.97		49.37		7.69		3.01		17.27	
i ^a	33.87		41.18		5.93		2.40		15.24	
i _d	21.69		22.67		4.75		2.04		11.49	
T _{g/w}	18.6		21.3		30.0		7.9		32.0	
T _s	20.5		20.1		36.0				27.8	
ψ	19.3		20.4						0.7	
ε										
El, Az	44.3	173.4	44.3	173.4	43.7	173.6	43.8	172.2	44.8	173.2
REMARKS:										

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); P = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N_b = OG530, N_c = RG650, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 16 February 1977

RADIOSONDE: (0900 MST) TTAA 66161 72HMS 99883 06261 00000 00234 /////
85573 06662 15003 70158 02867 35011 50580 14969 36036 40745 28367 00542 30944
445// 00547 25063 553// 35050 20203 631// 34025 15379 585// 32530 10629 623//
31526 88172 687// 30019 77220 35566 41851

TTBB 6616/ 72HMS 00883 06261 11862 04060 22850 06662 33822 07464 44746 03264
55726 03866 66563 06372 77400 28367 88359 33766 99212 639// 11209 623// 22172
687// 33166 621// 44155 585// 55123 645// 66100 623//

TTCC 66162 72HMS 70847 643// 31522 50053 629// 31026 30374 563// 28516 20636
477// 27026 88999 77999

TTDD 6616/ 72HMS 11838 663// 22500 629// 33390 579// 44284 563// 55256 521// 6621u
66218 517// 77200 477// 88164 503// 99120 429// 51515 10190 10101

ROCKETSONDE: No observation this date.

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 23 February 1977

TIME 1051 (Local) 1751 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	10.9	10.9	9.6		11.0
T _{dp}	-7.0	-7.0	-7.1		-10.8
W _d , W _s	320 6.7	320 6.7	320 4.5		320 6.3
P	MISSING	MISSING	25.28		25.93
C	○	○	○		○
M	NO	NO	NO		NO
T _{a25}			13.2		
T _{dp25}			-10.8		
I	78.26	78.26	73.03		74.21
I _a	62.06	62.06	61.53		55.47
I _d	39.83	39.83	39.35		38.26
N	97.84	97.84	99.44		83.78
N _a	72.75	72.75	78.24		63.47
N _b	67.83	67.83	72.61		58.75
N _c	56.54	56.54	60.23		49.30
N _d	48.02	48.02	51.59		43.17
i		50.85	7.10		21.33
i _a		42.44	5.43		19.23
i _d		23.20	4.35		14.51
T _{g/w}	MISSING	MISSING	18.8		18.0
T _s	MISSING	MISSING	21.0		18.0
ψ	19.2	19.5			0.8
c					
El, Az	42.1 150.2	42.1 150.2	41.7 150.7		42.5 149.9
REMARKS: METSAT I-A - Global outgoing data not available					
METSAT III - not operated this date.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 23 February 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	12.0	12.0	11.2		13.0
T ^a _{dp}	-7.5	-7.5	-16.3		-8.8
W _d , W _s	MISSING	MISSING	320 3.6		350 4.5
P	MISSING	MISSING	25.28		25.89
C	○	○	○		○
T ^M _{a25}	NO	NO	NO		NO
T ^M _{dp25}			14.5		
			-11.2		
I	85.50	85.50	79.91		78.24
I ^a	66.56	66.56	67.19		61.97
I ^d	42.77	42.77	42.91		39.02
N	99.64	99.64	102.06		86.46
N ^a	73.35	73.35	79.17		65.26
N ^b	68.55	68.55	72.80		60.15
N ^c	57.50	57.50	60.60		51.47
N ^d	50.18	50.18	51.22		45.12
i		53.92	7.46		23.00
i ^a		44.84	5.73		20.56
i ^d		24.68	4.65		15.60
T _{g/w}	MISSING	MISSING	22.0		22.7
T _s	23.0	21.0	25.0		16.0
ψ	19.2	19.5			0.8
ε					
E _l , Az	46.7 173.2	46.7 173.2	46.1 173.5		47.2 173.0

REMARKS:

METSAT IA - Global outgoing data not available this date.
METSAT III - not operated this date.

LEGEND

T^a = Air Temperature (°C); T^a_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T^M_{a25}, T^M_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 23 February 1977

RADIOSONDE: (0800 MST) TTAA 73154 72HMS 99873 04866 33010 00116 /////
 85474 04070 34020 70015 08973 32545 50560 17962 10609 40724 25168 30931 31967
 25059 383// 20209 479// 15393 ///// 10634 249// 88100 749// ///// 77500 30609
 414//

TTBB 7315/ 72HMS 00873 04866 11850 04070 22700 08973 33668 10369 44646 08772
 55572 10770 66500 17962 77469 21166 88446 19968 99400 25168 11373 23769 22333
 29767 33290 33167 44279 331// 55182 511// 66150 593// 77///
 99100 749//

TTCC 7315/ 72HMS 70845 719// 50048 659//

TTDD 7315/ 72HMS 11824 693// 22700 719// 33614 695// 44590 629// 55518 663//
 66440 601// 77308 591// 51515 10190 30366

ROCKETSONDE: (1040 MST) RRXX 23174 72269 81010 13101 25556 20005 29551 26014
 30551 25022 34552 24048 35551 25047 40534 24049 42527 23056 43525 23050 44523
 23050 45521 24058 48518 23054 49518 23052 50517 24072 52516 23077 53513 24088
 55515 25086 56515 25079 57516 24069 60521 26084 62519 29048 63522 29038 65///
 27017 67/// 25035 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 24 February 1977

TIME 0926 (Local) 1626 (GMT)

PARAMETER	METSAT I-A	METSAT J-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s C M T_{a25} T_{dp25}			13.1 -2.5 190 25.22 5.4 E120 \oplus No 12.9 -5.7		15.1 -1.4 130 25.89 7.7 60 \oplus 120 \oplus No
I I_a I_d N N_a N_b N_c N_d i i_a i_d			37.25 36.89 16.25 32.70 28.33 24.39 21.01 6.38 2.96 2.31 1.62		54.52 39.54 27.27 88.63 69.09 61.81 54.02 46.49 16.34 15.11 11.37
$T_{g/w}$ T_s ψ c E_l, Az			14.0 14.0 30.4 128.7		20.5 missing 1.0 31.0 128.0

REMARKS: MET SAT I, III - Not Operated This Day

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Preci-
 pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25
 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 c = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATIONS DATA

DATE: 24 February 1977

RADIOSONDE: (0800 MST) TTAA 74164 72HMS 99873 14470 17010 00104 /////
 85482 09465 22008 70059 01269 28552 50567 19541 07580 40731 27364 28087 30934
 365// 25057 459// 20205 527// 15387 625// 10632 739// 88999 77324 27121 412//

TTBB 7416/ 72HMS 00873 14470 11850 09465 22840 09465 33754 01257 44735 00058
 55716 02264 66700 01269 77650 01771 88527 15559 99500 19541 11493 20741 22458
 22561 33437 24561 44400 27364 55378 29362 66372 30132 77359 30758 88318 36158
 99307 35564 11250 459// 22233 447// 33192 549// 44184 541// 55139 653// 66119
 667// 77100 739// 51515 SUPER 53-49

TTCC 74161 72HMS 70838 667// 50043 615// 25510 30363 575// 20622 525// 10072
 505// 88851 795// ///// 77999

TTDD 7416/ 72HMS 11851 795// 22825 767// 33756 769// 44700 667// 55624 703//
 66574 611// 77500 615// 88446 589// 99387 607// 11352 575// 22256 591// 33230
 535// 44100 505// 55078 473// 51515 10190 07306

ROCKETSONDE: (0925 MST) RRXX 24163 72269 81010 13101 25555 23008 27551 26013
 28550 25011 30553 24026 33547 24040 35548 25043 37540 24047 40537 24055 41535
 24064 45519 23055 48509 23058 50505 23070 51503 23069 52508 23072 53507 23083
 54503 24086 55503 25077 56509 26068 57509 26071 59503 27096 60506 27100 62515
 27083 65*** 25075 66*** 26077 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 25 February 1977

TIME 0903 (Local) 1603 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	10.2	10.2	10.2		
T _{dp}	-0.6	-0.6	-0.8		
W _d , W _s	240 8.0	240 8.0	240 3.1		
P	25.73	25.73	25.08		
C	50. E220	50. E220	E40. 200		
M	No	No	No		
T _{a25}			12.1		
T _{dp25}			-1.1		
I	26.58	26.58	23.58		
I _a	18.33	18.33	18.18		
I _d	11.55	11.55	11.40		
N					
N _a					
N _b					
N _c					
N _d					
i		14.33	2.01		
i _a		9.70	1.51		
i _d		5.72	1.21		
T _{g/w}	missing	missing	13.8		
T _s	9.1	8.7	13.0		
ψ	19.6	19.7			
c					
E _l , Az	27.1 123.4	27.1 123.4	26.9 123.7		
REMARKS: Met Sat I-A - no global outgoing data Met Sat II - No normal incoming due to clouds Met Sat III - Not operated this day Met Sat IV - Not Operated this run					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 25 February 1977

TIME 1255 (Local) 1955 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d W _s P C M T _{a25} T _{dp25}			14.6 -13.9 240 25.01 45 No 17.2 -11.2		11.2 -3.2 300 25.73 50% E 60% Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d			81.65 68.38 43.87 103.38 80.68 73.73 61.16 52.06 7.93 6.03 4.75		25.46 21.24 12.75 7.70 7.01 5.08
T _{g/w} T _s ψ ε El, Az			24.5 29.0 46.2 193.2		13.2 11.8 2.2 47.3 193.2
REMARKS: MET SAT I - Not Operated This Run MET SAT III - Not Operated This Day MET SAT IV - Light rain occurring at time of observation, no normal incoming to clouds					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 25 February 1977

RADIOSONDE: (0800 MST) TTAA 75154 72HMS 99866 10864 22006 00133 /////
 85413 09260 23504 70983 03739 24028 50556 18563 23090 40718 31369 24128 30920
 41756 25042 491// 20188 519// 15372 603// 10620 649// 88107 689//
 24128 43012

TTBB 7515/ 72HMS 00866 10864 11850 09260 22838 07259 33783 03650 44768 00642
 55721 00946 66700 03739 77668 05144 88603 12921 99564 13761 11513 18561 22500
 18563 33473 20962 44400 31369 55385 26132 66364 30557 77300 41756 88295 42557
 99250 491// 11247 467// 22238 475// 33200 519// 44127 643// 55121 637// 66107
 689// 77100 649// 51515 SUPER 78-77 72-70 67-60 39-36

TTCC 75155 72HMS 70839 635// 50048 619// 26039 30369 583// 88999 77999

TTDD 7515/ 72HMS 11799 655// 22769 595// 33638 653// 44570 595// 55456 619//
 66423 565// 77300 583//

ROCKETSONDE: (1145 MST) RRXX 25185 72269 81010 13101 25553 25011 27552 25014
 30548 25031 35552 25040 37538 25045 39531 25047 40524 24057 41516 24068 42512
 24076 45504 25082 46509 25087 47511 25079 48510 24075 50504 24086 51506 24089
 51508 25080 53510 24078 55508 23085 57510 24090 58511 25090 60/// 27083 62///
 27068 64/// 26073 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION: 2 March 1977

TIME 0852 (Local) 1552 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	6.1	6.1	5.7		6.8
T _{dp}	-12.8	-12.8	-11.0		-7.2
W _d , W _s	270 12.1 15.6	270 12.1 15.6	230 4.5		280 10.3
P	25.67	25.67	25.07		25.79
C	110 ⊕	110 ⊕	70 ⊕		E 60 ⊕
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	37.50	37.50	46.79		16.43
I _a	30.23	30.23	38.47		13.00
I _d	23.73	23.73	25.77		8.46
N	66.87	66.87	91.37		15.45
N _a	52.82	52.82	72.80		2.04
N _b	49.94	49.94	67.92		0.89
N _c	42.26	42.26	57.22		0.64
N _d	33.37	33.37	48.97		0.51
i	18.25	21.96	5.09		5.31
i _a	15.08	19.77	3.92		4.96
i _d	9.65	9.75	3.34		3.87
T _{g/w}	missing	missing	7.5		7.7
T _s	8.8	9.2	9.0		5.3
ψ	20.0	19.5			0.7
ε					
El, Az	26.6 119.9	26.6 119.9	26.4 120.3		26.8 119.6
REMARKS: MET SAT I - Blowing sand MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 2 March 1977

TIME 1110 (Local) 1810 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	8.8	8.8	8.5		10.3
T_{dp}	-13.7	-13.7	-12.8		-8.4
W_d, W_s	240 9.8613.4	240 9.8613.4	250 4.566.7		280 10.3616.5
P	25.69	25.69	25.10		25.74
C	70 ①	70 ①	60 ①		65 ①
M	No	No	No		No
T_{a25}					
T_{dp25}					
I	86.34	86.34	80.37		81.18
I_a	67.95	67.95	68.25		62.84
I_d	43.96	43.96	44.25		41.67
N	92.08	92.08	103.75		101.79
N_a	66.03	66.03	80.48		76.50
N_b	62.06	62.06	74.30		69.99
N_c	52.34	52.34	61.91		59.64
N_d	44.06	44.06	53.47		52.62
i	45.58	52.79	7.93		23.73
i_a	39.18	43.32	6.13		21.52
i_d	25.17	23.94	4.95		16.32
$T_{g/w}$	missing	missing	15.3		17.2
T_s	18.2	19.1	18.0		15.5
Ψ	20.0	19.5			0.7
ϵ					
E_l, A_z	46.5 155.2	46.5 155.2	46.0 155.6		46.9 154.8
REMARKS: MET SAT I - Blowing sand MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 2 March 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	10.0	10.0	9.6		13.1
T _{dp}	-18.2	-18.2	-11.0		-3.0
W _d , W _s	240 13.4 16.1	240 13.4 16.1	260 4.5 7.6		280 7.7 12.9
P	25.66	25.66	25.13		25.74
C	70 ⊙	70 ⊙	E 60 ⊙		60 ⊙
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	93.17	93.17	76.15		84.22
I _a	73.42	73.42	29.64		70.10
I _d	46.82	46.82	25.77		43.69
N	87.76	87.76	101.69		99.11
N _a	58.46	58.46	73.55		74.54
N _b	29.53	29.53	68.67		68.84
N _c	18.97	18.97	57.60		57.98
N _d	14.89	14.89	48.22		50.57
i	49.83	55.75	8.52		24.66
i _a	41.78	45.59	7.04		22.37
i _d	26.27	25.32	5.56		16.93
T _{g/w}	missing	missing	20.9		27.5
T _s	18.2	19.1	21.0		30.4
ψ	20.0	19.5			0.7
ε					
E _l , Az	49.4 173.2	49.4 173.2	48.8 173.5		49.9 173.0
REMARKS: MET SAT I - Blowing sand MET SAT III - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 2 March 1977 TIME 1302 (Local) 2002 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	10.4	10.4	9.4		12.0
T _{dp}	-14.0	-14.0	-11.5		-9.3
W _d , W _s	260 12.5616.1	260 12.5616.1	210 2.7		260 7.7
P	25.64	25.64	25.06		25.74
C	70 ①	70 ①	E 60 ①		60 ①
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	90.02	90.02	96.79		83.24
I _a	65.17	65.17	86.03		72.26
I _d	44.81	44.81	51.63		44.95
N	83.55	83.55	99.62		101.66
N _a	56.66	56.66	74.11		75.99
N _b	53.18	53.18	62.29		69.48
N _c	45.98	45.98	57.41		58.24
N _d	38.30	38.30	51.22		51.09
i	48.94	53.81	9.35		24.56
i _a	40.79	46.73	7.04		22.25
i _d	25.57	25.53	5.97		16.93
T _{g/w}	missing	missing	19.5		21.5
T _s	missing	missing	24.0		25.8
ψ	20.0	19.5			0.7
ε					
Ei, Az	48.2 196.6	48.2 196.6	47.6 196.6		48.7 196.6
REMARKS: MET SAT I - Blowing sand MET SAT III - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

2 March 1977

RADIOSONDE: (0800 MST) TTAA 52154 72HMS 99866 05065 28010 00061 /////
 ///// 85/// 04465 27517 70950 09160 25536 50546 26361 25600 40706 33560
 25655 30902 469// 25022 489// 20170 473// 15356 567// 10613 585// 88287
 473// ///// 77400 25655 405//

TTBB 5215/ 72HMS 00866 05065 11850 04465 22813 01861 33730 06362 44700
 09161 55641 14758 66602 17501 77583 19501 88557 24160 99500 26361 11475
 25561 22400 33560 33366 37560 44353 40159 55340 419// 66316 455// 77287
 463// 88280 455// 99250 489// 11212 463// 22200 473// 33150 567// 44125
 573// 55113 541// 66100 585// 51515 SUPER 58-55

TTCC 52151 72HMS 70836 601// ///// 50044 619// ///// 31368 561// 25053
 20628 559// 26535 10077 483// 25537 88999 77999

TTDD 5215/ 72HMS 11853 625// 22793 565// 33593 639// 44500 619// 55400
 545// 66300 561// 77253 52311 88200 55911 99100 483// 11085 469// 51515
 10190 07314

ROCKETSONDE: (1345 MST) RRXX 02205 72269 81010 13101 25555 27010 30548
 27012 35539 27019 36536 27022 39521 26057 40522 26067 43522 26070 44525
 26064 45520 25061 50502 25085 52505 25080 55001 25063 59500 26074 60***
 24074 61*** 24073 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 9 March 1977

TIME 0855 (Local) 1555 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d W _s P C M T _{a25} T _{dp25}	7.0 -2.5 050 2.2 25.90 E180 (+) NO	7.0 -2.5 050 2.2 25.90 E180 (+) NO	10.0 -3.1 015 0.9 25.29 E80 (+) NO 10.8 -5.5		9.7 -7.3 CALM 26.01 100% E150 (+) NO
I I _a I _d N N _a N _b N _c N _d i i _a i _d	30.46 21.76 13.56	30.46 21.76 13.56	29.36 24.24 15.42		18.50 15.38 9.60
T _{g/w} T _s ψ ε El, Az	10.3 9.1 22.8	11.2 10.4 18.3	13.5 MISSING		12.8 13.5 MISSING
	29.2 118.5	29.2 118.5	29.1 118.9		29.4 118.2

REMARKS: METSAT I, II, IV - no Normal Incoming data due to clouds.
METSAT III - not operated this date.

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 9 March 1977

TIME 0934 (Local) 1634 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T^a T_{dp}^s W_d, W_s P C M T_{a25} T_{dp25}	8.9 -1.5 090 1.8 25.90 E180 NO NO	8.9 -1.5 090 1.8 25.90 E180 NO NO	14.4 -7.9 355 0.4 25.34 E80 NO NO		11.7 -6.9 CALM 26.00 E150 NO NO
I I_a I_d N N_a N_b N_c N_d i i_a i_d	36.45 26.69 16.63 16.35 13.72 8.56	36.45 26.69 16.63 20.36 16.50 8.26	39.45 32.41 21.17 3.31 2.51 2.12		16.65 13.65 8.33 4.89 4.35 3.26
$T_{g/w}$ T_s ψ ϵ E_l, Az	10.3 9.1 22.8 36.2 126.6	11.2 10.4 18.3 36.2 126.6	16.0 16.0 35.9 127.1		13.2 12.8 MISSING 36.4 126.4
REMARKS: METSAT I, II, IV - no Normal Incoming data due to clouds. METSAT III - not operated this date.					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_d = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 9 March 1977

TIME 1139 (Local) 1839 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	13.4	13.4	19.3		17.0
T _{dp} ^a	-4.4	-4.4	MISSING		-2.8
W _d ^a	110	110	210		360
P _s	2.7	2.7	4.5		2.1
C	25.85	25.85	25.32		25.96
M	E180	E180	E210		100° E150
T _{a25}	NO	NO	NO		220
T _{dp25}					NO
I	51.47	51.47	86.33		63.44
I _a	36.44	36.44	73.52		51.46
I _d	22.46	22.46	46.84		31.06
N	6.48	6.48	94.37		15.58
N _a	3.00	3.00	73.17		12.90
N _b	2.88	2.88	67.17		15.07
N _c	1.68	1.68	54.41		13.28
N _d	.96	.96	45.97		9.83
i	24.19	28.67	7.81		14.78
i _a	19.90	22.92	5.83		13.30
i _d	12.34	11.55	4.55		9.43
T _{g/w}	15.9	22.0	28.2		25.0
T _s	19.0	27.2	31.0		30.0
ψ	22.8	18.3			MISSING
ε					
E _l , Az	51.3 165.1	51.3 165.1	50.7 165.5		51.7 164.8
REMARKS: METSAT III - not operated this date.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 9 March 1977 TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III		METSAT IV	
T _a	13.5		13.5		20.0				18.3	
T _{dp}	-4.5		-4.5		MISSING				-4.2	
W _d	110	3.6	110	3.6	170	5.4			020	3.1
P	25.84		25.84		25.29				25.95	
C	E180		E180		180 \odot 210 \odot				E150 220	
M	NO		NO		NO				NO	
T _{a25}										
T _{dp25}										
I	98.32		98.32		85.23				50.82	
I _a	72.78		72.78		71.94				41.82	
I _d	44.81		44.81		44.25				25.25	
N	18.01		18.01		98.69				70.37	
N _a	12.36		12.36		75.23				44.32	
N _b	8.04		8.64		69.79				42.02	
N _c	3.72		3.72		57.22				34.48	
N _d	2.28		2.28		48.78				28.22	
i	46.70		54.38		7.46				13.94	
i _a	36.22		41.31		5.63				12.45	
i _d	22.89		21.40		4.35				9.19	
T _{g/w}	15.9		22.0		30.0				28.8	
T _s	19.0		27.2		32.0				32.0	
ψ	22.8		18.3						MISSING	
ε										
E1, Az	52.1	173.4	52.1	173.4	51.5	173.7			52.6	173.6
REMARKS: METSAT III - not operated this date.										

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 9 March 1977

TIME 1233 (Local) 1933 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	18.0	18.0	20.2		21.3
T _{dp}	-5.7	-5.7	MISSING		-3.0
W _d , W _s	120 4.9	120 4.9	180 5.4		130 1.0
P	25.81	25.81	25.28		25.93
C	150 ① 180 ①	150 ① 180 ①	E 210 -		100 ① E150 ① 220 ①
M	NO	NO	NO		NO
T _{a25}					
T _{dp25}					
I	89.92	89.92	84.13		92.49
I _a	69.67	69.67	70.88		81.26
I _d	43.54	43.54	44.54		49.75
N	97.00	97.00	75.23		64.88
N _a	72.27	72.27	74.30		47.25
N _b	66.63	66.63	70.36		42.66
N _c	54.98	54.98	57.60		38.44
N _d	47.66	47.66	48.78		36.27
i	44.23	52.10	7.34		28.51
i _a	37.21	42.44	5.53		24.91
i _d	23.28	22.14	4.35		18.02
T _{g/w}	15.9	22.0	30.7		39.5
T _s	19.0	27.2	32.0		45.0
ψ	22.8	18.3			MISSING
ε					
E _l , Az	52.1 186.8	52.1 186.8	51.4 186.9		52.6 186.7
REMARKS: METSAT III - not operated this date.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: J March 1977

RADIOSONDE: (0900 MST) TTAA 59161 72HMS 99876 08265 00000 00159 // // // //
 85506 11468 // // // 70110 03469 // // // 50573 15301 26531 40738 26516 26034 30940
 41332 26582 25062 469// 26638 20207 573// 26140 15386 635// 28595 10635 647//
 27548 88128 657// 27593 27205 25646 43063

TTBB 5916/ 72HMS 00876 08265 11850 11468 22835 13021 33798 11473 44746 06871
 55726 06071 66700 03469 77596 07960 88571 11769 99560 12539 11547 10301 22514
 13501 33500 15301 44400 26516 55320 38527 66300 41332 77266 45534 88254 46133
 99200 573// 11164 623// 22157 617// 33128 657// 44112 619// 55100 647// 51515
 SUPER 60-57

TTCC 59161 72HMS 70852 665// 27022 50057 619// 27037 30375 601// 30518 20633
 547// 27004 10087 445// 27016 88999 77999

TTDD 5916/ 72HMS 11676 675// 22592 639// 33542 657// 44500 619// 55388 613//
 66338 577// 77300 601// 88212 535// 99200 547// 11100 445// 22087 443// 51515
 10190 07327

ROCKETSONDE: (1110 MST) RRXX 09181 77269 81010 63101 25555 30007 30548 35002
 33542 23012 35538 25027 37537 26034 40518 25059 41520 25061 44513 24064 45505
 23064 47500 24064 50503 24057 54501 22042 55507 21040 56505 20040 60518 17046
 63526 17037 65533 22028 66/// 26018 67/// 27029 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 11 March 1977

TIME 0943 (Local) 1643 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	6.9	6.9	8.3		8.1
T _{dp} ^a	-6.6	-6.6	-12.8		-7.1
W _d , W _s	360 2.7	360 2.7	220 1.3		030 3.1
P	25.79	25.79	25.23		25.87
C	NO	NO	NO		NO
M					
T _{a25}					
T _{dp25}					
I	66.18	66.18	59.91		62.57
I ^a	50.38	50.38	50.99		52.00
I _d	32.84	32.84	34.00		34.22
N	48.38	48.38	55.72		65.01
N ^a	35.77	35.77	43.15		48.66
N _b	33.61	33.61	39.59		44.19
N _c	27.61	27.61	31.89		37.68
N _d	24.01	24.01	27.02		32.95
i	32.81	38.23	5.44		18.73
i ^a	27.69	31.61	3.92		14.67
i _d	17.51	17.58	3.13		11.24
T _{g/w}	16.5	15.8	15.3		16.5
T _s	17.0	14.5	20.2		17.0
Ψ	19.4	17.5			1.3
ε					
E _l , A _z	38.3 128.2	38.3 128.2	38.0 128.7		38.6 127.8
REMARKS: METSAT III - not operated this date.					

LEGEND

T^a = Air Temperature (°C); T_{dp}^a = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GC495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%)
ε = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 11 March 1977

RADIOSONDE: No flight this date.

ROCKETSONDE: (1053 MST) RRXX 11175 72269 81010 13101 25553 20004 30549 24009
31545 23010 35541 27023 40525 25048 43505 26047 44002 26048 45002 26048 47504
2 044 49507 24041 50504 25040 55513 25039 60/// 27044 62/// 26045 64/// 28057
JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 16 March 1977 TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III		METSAT IV	
T _a	12.1		12.1		16.7		16.2		20.0	
T _{dp}	2.1		2.1		-4.8		2.4		0.1	
W _d , W _s	050	3.1	050	3.1	180	4.0	180	0.4	160	2.1
P	25.88		25.88		25.35		25.59		26.08	
C	E150		E150		E120		E120		E110	
M	NO		NO		NO		NO		NO	
T _{a25}					15.0					
T _{dp25}					-5.0					
I	59.35		59.35		46.88		42.74		68.55	
I _a	43.94		43.94		38.87		32.24		57.20	
I _d	26.91		26.91		23.95		22.06		34.97	
N										
N _a										
N _b										
N _c										
N _d										
i	31.13		33.45		4.26		2.13		19.77	
i _a	26.21		27.08		3.22		1.73		16.32	
i _d	16.02		14.09		2.53		0.70		12.09	
T _{g/w}	25.0		24.1		21.8		9.5		25.3	
T _s	26.1		26.5		21.2				31.8	
ψ	19.8		18.6						MISSING	
ε										
El, Az	54.9	173.8	54.9	173.8	54.3	174.1	54.4	172.3	55.4	173.5
REMARKS: METSAT I, II, III, IV - no Normal Incoming data.										

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)

ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 16 March 1977

RADIOSONDE: (1000 MST) TTAA 66171 72HMS 99877 15066 00000 00153 /////
 85524 11065 16008 70129 06666 25024 50580 11161 24064 40747 23718 24555 30952
 37748 24615 25075 487// 27095 20218 589// ///// 15396 633// ///// 10643 661//
 ///// 88185 635// ///// 77270 26136 41214

TTBB 6617/ 72HMS 00877 15066 11867 12665 22850 11065 33831 10462 44813 10862
 55763 06861 66740 07465 77700 06666 88663 01666 99613 01368 11606 01767 22535
 06366 33500 11161 44440 18322 55433 20926 66405 23116 77400 23718 88345 29535
 99300 37748 11269 44550 22200 589// 33185 635// 44166 609// 55124 671// 66106
 647// 77100 661// 51515 SUPER 70-66

TTCC 66175 72HMS 70861 695// ///// 50065 653// 27060 88999 77999

TTDD 6617/ 72HMS 11856 605// 22655 719// 33626 663// 44500 653// 55470 603//

ROCKETSONDE: (1140 MST) RRXX 16184 72269 81010 63101 24/// 03006 25556 05006
 29547 01006 30541 34009 32535 33016 35536 35013 38535 31012 40528 29014 42522
 29026 45518 27023 50510 24031 51512 25026 52507 26021 55515 28023 57514 28036
 60523 27035 61525 27029 65529 26032 66532 26025 67/// 25008 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 17 March 1977

TIME 0902 (Local) 1602 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	13.9	13.9	13.9		17.9
T _{dp}	-15.1	-15.1	-13.7		-10.2
W _d , W _s	030 2.7	030 2.7	220 4.5		250 10.3 16.5
P	25.66	25.66	25.08		25.65
C	150 ⊕	150 ⊕	E 110 ⊕		100 ⊕
M	No	No	No		No
T _{a25}			13.9		
T _{dp25}			-18.1		
I	18.49	18.49	24.22		58.54
I _a	12.86	12.86	19.24		47.56
I _d	7.84	7.84	12.16		30.56
N					92.34
N _a					69.48
N _b					61.56
N _c					53.26
N _d					45.72
i	8.85	9.78	2.37		17.69
i _a	7.29	7.43	1.91		16.08
i _d	4.17	3.50	1.52		11.97
T _{g/w}	11.8	12.8	14.8		21.0
T _s	10.2	11.3	15.0		21.0
ψ	Missing	Missing			0.8
c					
E _i , Az	33.1 117.6	33.1 117.6	32.9 118.0		33.2 117.2

REMARKS: MET SAT II - No normal incoming data due to obscuration
MET SAT III - Not operated this day

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Spec. (m/s)); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG650, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emissivity (%); E_i, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 17 March 1977

TIME 0932 (Local) 1632 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	12.6	12.6	13.7		19.3
T ^{dp}	-9.8	-9.8	-12.9		-7.3
W _d , W _s	150 0.9	150 0.9	180 4.566.7		260 12.4619.6
P	25.67	25.67	25.09		25.64
C	150 ①	150 ①	E 110 ①		100 ①
M	No	No	No		No
T _{a25}			15.0		
T _{dp25}			-14.6		
I	21.74	21.74	50.64		69.64
I ^a	15.54	15.54	39.83		54.93
I ^d	9.75	9.75	25.57		36.74
N					91.83
N ^a					60.15
N ^b					57.98
N ^c					49.81
N ^d					44.32
i	10.75	11.60	5.33		20.29
i ^a	8.90	8.94	4.02		18.38
i ^d	5.27	4.34	2.83		13.78
T _{g/w}	11.8	12.8	16.9		24.7
T _s	10.2	11.3	15.0		23.2
ψ	Missing	Missing			0.8
c					
EI, Az	38.5 124.0	38.5 124.0	38.2 124.5		38.7 123.6
REMARKS: MET SAT I - No normal incoming data MET SAT III - Not operated this day					

LEGEND

T^a = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Gl^a = Incoming: I = WG280, I^a = GG495, I^d = RG695
No normal incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Gl^d = Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emissivity (%); EI, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 17 March 1977

TIME 1127 (Local) 1827 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	16.4	16.4	19.6		18.2
T _{dp}	-2.9	-2.9	-7.9		-3.6
W _d , W _s	240 17.9 22.4	240 17.9 22.4	230 4.5 8.9		250 10.3 20.6
C	25.62	25.62	25.05		25.61
M	W 4 X	W 4 X	E 150 ①		220 - ①
T _{a25}	No	No	No		No
T _{dp25}			17.9		
			-7.6		
I	51.47	51.47	101.01		90.10
I _a	44.91	44.91	87.88		76.71
I _d	28.39	28.39	51.34		45.83
N			88.18		90.68
N _a			67.73		59.00
N _b			67.54		59.77
N _c			59.47		48.40
N _d			47.27		43.81
i	missing	29.58	8.64		25.18
i _a	24.60	23.55	7.54		22.97
i _d	13.53	12.39	6.67		17.29
T _{g/w}	missing	missing	30.8		32.3
T _s	missing	missing	37.0		28.7
ψ	missing	missing			0.8
ε					
El, Az	53.7 159.9	53.7 159.9	53.1 160.4		54.1 159.5

REMARKS:

MET SAT I - Blowing sand obscuration
MET SAT III - Not operated this day

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Sol - Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 17 March 1977

TIME 1325 (Local) 2025 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d P _s C M T _{a25} T _{dp25}	15.8 -3.3 260 16.1622.8 25.62 W 4 X No	15.8 -3.3 260 16.1622.8 25.62 W 4 X No	19.7 -6.2 270 6.768.9 25.06 600 150 - 0 No 19.8 -6.4		
I I _a I _d N N _a N _b N _c N _d i i _a i _d	71.32 59.91 37.71 missing 39.43 22.49	71.32 59.91 37.71 58.48 42.07 22.88	100.92 65.74 56.42 8.24 5.23 4.25		
T _{g/w} T _s Ψ ε El, Az	missing missing missing 51.6 209.3	missing missing missing 51.6 209.3	26.0 36.0 51.0 209.2		
REMARKS: MET SAT I - Blowing sand obscuration MET SAT III - Not operated this day MET SAT IV - Not operated this day MET SAT II - Normal incoming data not available due to clouds					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = RG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 17 March 1977

RADIOSONDE: (0800 MST) TTAA 67155 72HMS 99867 16667 24015 00035 /////
 85431 13666 23516 70027 02064 23557 50568 13963 25082 40736 20357 30943 35158
 25068 445// 20213 581// 15390 675// 10632 649// 88117 727// ///// 77425 24624
 439//

TTBB 6715/ 72HMS 00867 16667 11850 13666 22793 08466 33737 03846 44726 04064
 55700 02064 66688 02065 77675 03165 88646 00064 99630 00264 11563 06164 22500
 13963 33473 16962 44451 18750 55445 19101 66439 17901 77425 18101 88413 19350
 99400 20357 11390 20359 22368 21959 33329 28759 44300 35158 55265 41758 66250
 445// 77200 581// 88173 643// 99168 633// 11150 675// 22777 727// 44107 667//
 55100 649// 61515 SUPER 33-30

TTCC 67152 72HMS 70852 651// ///// 50059 609// ///// 30382 577// ///// 20642
 523// 12515 10101 437// ///// 88999 77999

TTDD 6715/ 72HMS 11953 663// 22853 593// 33700 651// 44643 653// 55576 601//
 66500 609// 77423 557// 88300 577// 99200 523// 11122 429// 22100 437// 33093
 431//

ROCKETSONDE: (1120 MST) RRXX 17182 72269 81010 13101 25557 07006 30544 09011
 31545 06009 35529 04010 36532 03014 37530 02016 40525 01011 41519 36010 42513
 31012 44514 31013 45510 31013 50505 30022 51502 29022 55513 27008 57520 22005
 58517 24014 60521 26017 62519 29029 63523 30034 64528 30037 65/// 30032 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 23 March 1977

TIME 0903 (Local) 1603 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	9.2	9.2	15.5	12.0	15.1
T _{dp}	-2.2	-2.2	-5.5	2.2	-2.3
W _d , W _s	140 0.4	140 0.4	130 1.3	CALM	160 0.9
P	25.87	25.87	25.31	25.55	25.99
C	E150 (M)	E150 (M)	140 (M)	E120 (M)	160 (M)
M	No	No	No	No	No
T _{a25}			14.8		
T _{dp25}			-5.0		
I	66.18	66.18	58.62	58.66	54.73
I _a	50.16	50.16	48.48	52.24	46.23
I _d	32.10	32.10	32.28	22.04	26.26
N	77.65	77.65	79.36		74.31
N _a	59.51	59.51	59.66		55.10
N _b	53.51	53.51	55.53		50.18
N _c	28.35	28.35	48.03		40.70
N _d	missing	missing	41.09		35.29
i	28.78	37.66	4.85	10.73	16.75
i _a	21.48	20.40	3.72	9.31	14.75
i _d	13.03	15.89	3.03	8.05	11.37
T _{g/w}	23.0	20.5	20.2	10.2	17.8
T _s	18.5	19.5	24.1		
ψ	19.5	19.4			1.0
ε					
El, Az	35.2 116.0	35.2 116.0	35.0 116.5	34.3 115.5	35.3 115.6
REMARKS:	MET SAT III - No normal incoming this day				

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 23 March 1977

TIME 1052 (Local) 1752 (GMT)

PAPA-METLR	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d W_s C M T_{a25} T_{dp25}	16.7 -2.0 040 2.2 25.81 90 \oplus No No	16.7 -2.0 040 2.2 25.81 90 \oplus No	17.8 -4.5 230 2.7 25.30 E70 \oplus No 16.2 -5.6	14.6 1.8 CALM 25.54 120 \oplus No	19.8 0.8 170 3.6 25.97 140 \oplus No
J I_a I_d N N_a N_b N_c N_d i i_a i_d	86.87 84.78 33.90 80.59 53.64 42.78 missing missing 55.54 47.76 31.14	86.87 84.78 33.90 80.59 53.64 42.78 missing missing 65.42 51.76 28.81	33.49 26.88 16.57 3.43 2.61 2.02	93.88 79.10 52.10 12.67 11.38 9.05	92.27 70.27 47.47 87.15 63.63 58.22 47.30 41.42 23.73 21.28 16.20
$T_{g/w}$ T_s ψ c El, Az	17.8 25.0 19.5 52.7 145.6	21.6 30.0 19.4 52.7 145.6	26.3 29.1 52.2 146.2	10.5 52.0 144.6	30.6 39.7 1.0 53.1 145.1
REMARKS: <u>METSAT II, III</u> No normal incoming this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d , W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25} , T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 23 March 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	20.3 -3.3 170 25.75 4.0 70 ☉ No	20.3 -3.3 170 25.75 4.0 70 ☉ No	19.3 -5.1 180 25.27 4.5 E70 ☉ No 17.5 -4.8	16.0 3.8 130 25.48 0.4 ○ No	21.1 -0.3 210 25.91 3.1 70 ☉ No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	95.17 72.99 46.93 92.98 67.82 63.73 52.62 45.47 47.59 38.81 24.88	95.17 72.99 46.93 92.98 67.82 63.73 52.62 45.47 54.38 44.21 23.94	91.19 78.79 50.48 73.55 55.53 51.97 39.59 31.89 9.47 7.14 5.76	108.94 88.06 58.12 11.64 10.34 8.05	101.09 71.20 51.52 96.76 70.59 64.71 54.86 48.74 25.60 22.85 17.29
$T_{g/w}$ T_s Ψ ϵ E_l, A_z	30.1 28.5 19.5 57.7 174.3	32.8 36.0 19.4 57.7 174.3	28.5 35.4 57.1 174.6	12.4 57.2 172.7	35.5 41.4 1.0 58.2 174.0
REMARKS: MET SAT III - No normal incoming this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION UMSP 7218

DATE OF OBSERVATION 23 March 1977

TIME 1314 (Local) 2014 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	22.0	22.0	20.4		22.2
T_{dp}	-6.8	-6.8	-3.1		-0.8
W_d, W_s	170 5.4	170 5.4	150 4.5		140 2.6
C	25.71 70 ① No	25.71 70 ① No	25.22 70 ① No		25.85 70 ① No
T_{a25}	19.2	19.2	18.5		
T_{dp25}			-5.2		
I	92.44	92.44	87.61		95.43
I_a	71.49	71.49	74.97		73.64
I_d	45.23	45.23	47.03		49.49
N	93.74	93.74	87.24		95.08
N_a	68.20	68.20	64.92		69.39
N_b	63.86	63.86	59.10		63.39
N_c	52.87	52.87	49.53		53.66
N_d	45.85	45.85	41.09		47.90
i	47.59	54.84	9.11		25.08
i_a	39.15	44.84	6.93		22.49
i_d	25.57	25.05	5.76		16.93
$T_{p/w}$	30.1	32.8	30.5		35.5
T_s	30.5	37.5	44.5		43.5
ϵ	19.5	19.4			1.0
El, Az	54.7 207.4	54.7 207.4	54.1 207.2		55.2 207.6

REMARKS: MET SAT III - Not operated this run

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{p/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 23 March 1977

RADIOSONDE: (0900 MST) TTAA 73161 72HMS 99874 13867 00000 00126 // // // //
 85495 09666 19004 02462 15512 50570 18963 19527 40733 29767 22037 30933 427//
 25577 25054 509// 24610 20199 521// 25088 15384 555// 25074 10637 675// 27560
 88235 517// 25084 77250 24613 43444

TTBB 7316/ 72HMS 00874 13867 11864 10666 22804 09265 33793 08065 44781 08664
 55700 02462 66575 11333 77556 13550 88531 15935 99511 18560 11483 20367 22467
 22365 33425 28941 44412 28567 55400 29767 66376 33167 77360 353// 88331 377//
 99269 485// 11235 517// 22210 503// 33195 507// 44144 559// 55132 577// 66100
 675// 51515 SUPER 80-79

TTCC 7316/ 72HMS 70851 659// 27028 50055 649// 30017 30374 561// 14005 20634
 523// 16009 88999 77999

TTDD 7316/ 72HMS 11956 693// 22886 665// 33776 675// 44700 659// 55690 637//
 66602 681// 77514 637// 88500 649// 99472 645// 11448 601// 22398 587// 33361
 605// 44300 561// 55180 521// 66115 443// 51515 10190 10092

TTAA - Insert after 3rd group, second line: 70309

ROCKETSONDE: (1055 MST) RRXX 23180 72269 81010 63101 25555 08003 28552 04001
 30545 26002 32543 27013 35537 28014 40520 26026 41517 27033 45510 27029 47505
 27029 48502 26033 50508 27035 55515 25035 56513 25044 57514 26054 60523 26053
 65524 28048 70547 29039 72*** 27010 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 29 March 77 TIME 0943 (Local) 1643 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d P_s C M T_{a25} T_{dp25}	10.2 -2.3 240 25.71 9.8 E 40 \oplus No	10.2 -2.3 240 25.71 9.8 E 40 \oplus No			14.7 -1.7 240 25.77 9.3 60 \oplus No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	20.27 15.43 8.47 	20.27 15.43 8.47 			81.39 64.46 43.06 79.95 59.42 53.42 46.94 40.94 23.73 21.64 16.20
$T_{g/w}$ T_s ψ ϵ E_l, Az	9.3 missing 19.7 44.4 123.1	7.5 missing 20.0 44.4 123.1			19.5 25.2 0.9 44.6 122.5
REMARKS: MET SAT I - No normal incoming due to clouds MET SAT II - Observations not made this date MET SAT III - Observations not made this date					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P_s = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 29 March 77

RADIOSONDE: (1000 MST) TTAA 79171 72HMS 99866 12060 26524 00057 /////
 ///// 85418 08464 26531 70980 06701 25029 50554 20368 25583 40717 30565
 26613 30916 435// 26101 25037 497// 25101 20184 491// 24072 15370 564//
 25081 10623 585// 23556 88257 503// 25601 77336 26626 43013

TTBB 79171 72HMS 00866 12060 11850 08464 22802 04060 33700 06701 44639
 10915 55605 14156 66596 13761 77594 13563 88588 14561 99582 15364 11574
 14768 22531 17169 33500 20368 44470 23767 55449 24767 66413 29566 77400
 30565 88399 33165 99371 33561 11467 33966 22257 503// 33245 495// 44245
 469// 55190 493// 66150 565// 77126 589// 88103 655// 99103 623// 11100
 585// 51515 SUPER 60-59 59-58

TTCC 79175 72HMS 70846 585// 25026 50056 611// 09023 88999 77999

TTDD 79171 72HMS 1197// 577// 22883 625// 33812 525// 44771 557// 55750
 555// 66606 621// 77569 581// 88495 605//

ROCKETSONDE: (1000 MST) RRXX 29170 72269 81010 13101 24556 25009 25553
 27009 26555 28010 30548 28012 32541 28020 35537 27021 37535 28028 38533
 28029 39530 27033 40520 27037 41514 27041 45508 26040 48508 25046 50508
 25061 52511 26060 53508 27049 55512 27046 57516 27051 58519 27041 59522
 26037 60520 25052 61521 24063 62523 24055 64531 27062 65/// 28064 66///
 29058 67/// 31034 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 30 March 77

TIME 0945 (Local) 1645 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	8.0	8.0	11.3	7.2	13.7
T_{dp}	-1.1	-1.1	-6.9	-2.8	-4.5
W_d, W_s	320 2.2	320 2.2	360 0.9	290 1.0	CALM
P	25.97	25.97	25.43	25.68	26.11
C	210 - \odot	210 - \odot	\odot	220 - \odot	250 - \odot
M	No	No	Yes	No	No
T_{a25}			13.0		
T_{dp25}			-8.8		
I	80.04	80.04	74.86	71.37	78.56
I_a	69.51	69.51	63.90	50.00	60.86
I_d	40.78	40.78	43.20	31.96	40.40
N	94.76	94.76	96.44		91.12
N_a	71.90	71.90	72.42		66.87
N_b	65.52	65.52	68.48		61.46
N_c	55.04	55.04	57.41		53.30
N_d	48.28	48.28	48.78		46.82
i	missing	45.39	5.21	4.85	21.02
i_a	missing	36.40	4.02	4.03	18.14
i_d	20.40	20.02	3.24	2.11	13.91
$T_{g/w}$	7.8	10.3	23.9	9.7	30.3
T_s	16.0	17.0	15.0		31.0
ψ	21.9	19.9			
ϵ					
E_l, A_z	45.1 123.3	45.1 123.3	44.9 123.9	44.3 122.7	45.3 122.7
REMARKS: MET SAT III - No normal incoming data this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s)); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 30 March 77

TIME 1121 (Local) 1821 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	13.9	13.9	14.8	10.0	17.1
T _{dp}	-3.8	-3.8	-7.8	-4.2	-1.3
W _d , W _s	130 2.2	130 2.2	180 1.8	340 2.1	145 2.1
P	26.01	26.01	25.43	25.68	26.08
C	210 - (C)	210 - (C)	220 - (C)	220 - (C)	250 - (C)
M	No	No	Yes	No	No
T _{a25}			15.0		
T _{dp25}			-4.9		
I	96.53	96.53	88.35	100.56	96.84
I _a	83.43	83.43	76.28	78.06	75.26
I _d	47.99	47.99	50.67	50.60	49.87
N	96.04	96.04	90.06		94.60
N _a	71.14	71.14	67.92		69.15
N _b	64.50	64.50	63.41		61.94
N _c	53.77	53.77	52.53		53.54
N _d	46.74	46.74	45.03		46.46
i	missing	55.29	6.75	4.56	25.49
i _a	missing	44.58	5.13	3.21	22.37
i _d	24.78	24.05	4.04	1.01	17.05
T _{p/w}	7.3	10.5	27.7	10.5	39.5
T _s	23.0	24.0	33.6		38.8
ψ	21.9	19.9			0.9
ε					
El, Az	58.4 156.2	58.4 156.2	57.9 156.8	57.8 154.8	58.8 155.7

REMARKS: MET SAT III - No Normal Incoming Data this Day

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{p/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 30 March 77 TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T^a	14.9	14.9	15.3	11.2	17.8
T_{dp}^a	-4.5	-4.5	-8.4	-4.9	-1.3
W_d, W_s	100 2.7	100 2.7	190 3.6	340 1.5	150 2.1
P	26.01	26.01	25.43	25.67	26.08
C	200 - (I)	200 - (I)	220 - (I)	220 - (IV)	250 - (I)
T_{a25}^M	No	No	Yes	No	No
T_{dp25}			15.8		
			-6.5		
I	99.05	99.05	93.47	104.75	100.33
I^a	86.31	86.31	80.24	75.67	77.82
I^d	49.89	49.89	50.98	49.30	50.88
N	96.55	96.55	99.44		95.68
N^a	71.52	71.52	75.80		69.63
N^b	65.13	65.13	69.61		56.90
N^c	53.90	53.90	57.97		49.70
N^d	45.98	45.98	49.72		42.38
i	missing	57.57	7.10	3.78	25.81
i^a	missing	46.10	5.53	2.69	22.37
i^d	26.07	24.68	4.25	0.60	16.93
$T_{g/w}$	7.4	10.5	29.3	10.6	41.0
T_s	23.0	25.0	34.5		40.0
Ψ	21.9	19.9			0.9
E, Az	60.4 175.0	60.4 175.0	59.8 156.8	60.0 173.2	61.0 174.7
REMARKS: MET SAT III - No normal incoming data this day					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I^a = \text{GG495}$, $I^d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N^a = \text{GG495}$, $N^b = \text{OG530}$, $N^c = \text{RG630}$, $N^d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i^a = \text{GG495}$, $i^b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 c = Emissivity (%); E, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 30 March 77

TIME 1245 (Local) 1945 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	17.1	17.1	16.1	12.0	19.1
T_{dp}	-2.9	-2.9	-2.5	-5.2	0.1
W_d, W_s	080 1.8	080 1.8	180 3.1	320 2.1	250 3.1
P	25.93	25.93	25.41	25.65	26.04
C	200 - (C)	200 - (C)	220 - (C)	220 - (C)	250 - (C)
M	No	No	Yes	No	No
T_{a25}			16.1		
T_{dp25}			-5.8		
I	96.64	96.64	92.48	94.83	100.11
I_a	84.51	84.51	78.79	71.34	77.35
I_d	48.83	48.83	49.62	46.89	50.38
N	96.68	96.68	98.50		95.68
N_a	71.52	71.52	72.23		70.11
N_b	64.24	64.24	68.48		62.91
N_c	54.15	54.15	50.66		54.50
N_d	46.74	46.74	48.03		47.30
i	missing	57.00	6.98	3.39	26.01
i_a	missing	45.84	5.23	2.48	22.85
i_d	25.87	24.36	4.04	0.50	17.29
$T_{g/w}$	7.5	10.5	31.7	10.6	37.2
T_s	27.0	27.0	36.5		40.8
ϵ	21.9	19.9			0.9
El, Az	59.4 197.4	59.4 197.4	58.8 197.3	59.3 195.5	59.9 197.5
REMARKS: MET SAT III - No normal incoming data this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 30 March 77

RADIOSONDE: (0900 MST) TTAA 80161 72HMS 99878 11664 00000 00168 /////
 /////< 85526 07465 17503 70093 02167 25030 50570 15562 25058 40734 26966
 24596 30935 431// 24070 25054 545// 24097 20197 521// 24576 15380 587//
 24562 10630 639// 25045 88232 565// 24600 77306 24601 41825

TTBB 8016/ 72HMS 00878 11664 11867 08664 22850 07465 33812 05864 44734
 00958 55687 02970 66677 03768 77647 04964 88617 07172 99596 09371 11587
 10162 22547 11769 33528 12364 44530 15562 55448 21561 66400 26966 77335
 36165 88300 431// 99232 565// 11218 569// 22212 541// 33200 521// 44133
 625// 55100 639//

TTCC 80167 72HMS 70848 657// 23028 88999 77999

TTDD 8016/ 72HMS 11954 651// 22816 633// 33656 665// 44612 633// 55558
 581// 66530 599// 51515 10190 50056

ROCKETSONDE: (1110 MST) RRXX 30181 72269 81010 13101 25553 25009 30543
 27015 34534 26019 35534 26027 37531 28033 38523 27032 40517 27034 41514
 27031 45507 25050 50506 26048 52506 27051 54507 26052 55509 27042 56512
 27033 57515 26049 60516 26053 62516 26060 65525 27050 66528 28043 67532
 31036 68537 33044 70550 34053 71*** 35043 72*** 01030 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 4 April 77

TIME 0900 (Local) 1600 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d W_s P C M T_{a25} T_{dp25}	4.2 -4.0 350 25.92 3.6 ○ No	4.2 -4.0 350 25.92 3.6 ○ No	8.0 -7.5 360 25.39 4.5 250 - ⊕ No		
I I_a I_d N N_a N^a N^b N^c N^d i i_a i_d	70.38 54.02 35.91 91.57 69.73 63.73 53.64 46.62 missing 32.94 18.81	70.38 54.02 35.91 91.57 69.73 63.73 53.64 46.62 40.05 32.62 17.90	65.50 54.81 36.59 93.62 69.42 65.48 55.16 46.53 5.68 4.52 3.54		
$T_{g/w}$ T_s ψ ϵ E_l, Az	13.7 24.2 24.4 38.3 111.7	13.3 14.9 19.7 38.3 111.7	16.0 15.0 38.2 112.2		
REMARKS: MET SAT III - Not operated this day MET SAT IV - Not operated this run					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_d = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP-721a

DATE OF OBSERVATION 4 April 77 TIME 1252 (Local) 1952 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III		METSAT IV	
T_a	14.2		14.2		11.8				14.8	
T_{dp}	-6.2		-6.2		-6.7				-8.7	
W_d, W_s	120	0.9	120	0.9	340	4.0			240	2.1
P	25.92		25.92		25.39				26.01	
C	○		○		250 - ①				○	
M	No		No		No				No	
T_{a25}										
T_{dp25}										
I	98.11		98.11		92.66				95.54	
I_a	77.17		77.17		79.97				75.26	
I_d	50.21		50.21		50.48				49.12	
N	97.83		97.83		101.13				98.68	
N_a	72.67		72.67		74.48				71.79	
N_b	66.41		66.41		70.73				64.71	
N_c	55.43		55.43		58.35				56.18	
N_d	48.02		48.02		50.09				49.10	
i	51.18		58.35		6.98				26.43	
i_a	50.71		47.61		5.43				23.22	
i_d	27.66		26.06		4.35				17.53	
$T_{g/w}$	18.5		24.8		31.1				40.8	
T_s	29.1		32.9		27.0				39.2	
ψ	24.4		19.7						0.8	
E, Az	60.7	202.6	60.7	202.6	60.6	200.6			61.2	202.8

REMARKS: MET SAT III - Not operated this day

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 e = Emissivity (%); E, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 4 April 77

RADIOSONDE: (0800 MST) TTAA 54151 72HMS 99876 05860 02008 00164 /////
 ///// 85507 03464 01013 70046 07566 35022 50560 22363 02035 40720 34560
 01056 30916 467// 01592 25035 531// 00572 20180 527// 31044 15364 587//
 29047 10618 579// 27552 88250 531// 00572 77312 01609 43239

TTBB 5415/ 72HMS 00876 05860 11865 04466 22829 01064 33715 07963 44649
 08570 55533 20162 66500 22363 77400 34560 88346 40760 99250 531// 11230
 505// 22173 533// 33143 605// 44127 613// 55100 579//

TTCC 54152 72HMS 70839 593// 27532 50050 563// 25514 30374 547// 22520
 20635 509// 24525 88999 77999

TTDD 5415/ 72HMS 11813 641// 22700 593// 33522 595// 44500 563// 55452
 557// 66428 579// 77360 577// 88200 509// 99172 515//

ROCKETSONDE: (1055 MST) RRXX 04180 72269 81010 13101 25548 24012 27550
 25017 30541 26019 35532 26038 36527 26039 37521 27037 38522 29033 40519
 27018 45503 25044 46001 26048 47005 27047 48006 28046 50003 29032 52502
 26022 55509 21036 56510 22039 57507 24035 59515 29021 60514 26019 61511
 25023 62514 29015 63519 02018 64523 05027 65528 06025 66*** 08018

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 5 April 77

TIME 0911 (Local) 1611 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III	METSAT IV	
T_a	12.5		12.5		10.8			12.2	
T_{dp}	6.1		6.1		-4.9			-5.5	
W_d, W_s	360	0.9	360	0.9	180	4.0		CALM	
P	26.06		26.06		25.51			26.22	
C	○		○		○			○	
M	No		No		No			No	
T_{a25}									
T_{dp25}									
I	72.79		72.79		67.25			65.61	
I_a	54.34		54.34		56.26			50.64	
I_d	36.55		36.55		39.85			33.59	
N	91.83		91.83		92.87			92.08	
N_a	69.60		69.60		69.79			68.19	
N_b	64.24		64.24		66.60			61.34	
N_c	53.13		53.13		54.41			53.42	
N_d	46.62		46.62		46.72			46.34	
i	missing		40.84		6.04			19.56	
i_a	34.34		33.50		4.62			17.17	
i_d	18.91		18.01		3.54			13.06	
$T_{B/W}$	22.8		20.7		19.3			27.7	
T_s	15.2		14.1		23.2			25.2	
ψ	20.1		19.5					0.8	
ϵ									
$E1, Az$	40.7	113.6	40.7	113.6	40.6	114.2		40.9	113.1
REMARKS: MET SAT III - Not operated this day									

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{B/W}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); $E1, Az$ = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 5 April 77

RADIOSONDE: No flight this date.

ROCKETSONDE: No flight this date.

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 6 April 77

TIME 1141 (Local) 1841 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III		METSAT IV	
T _a	18.8		18.8		21.7		17.5		22.4	
T _{dp}	-3.8		-3.8		-1.8		1.1		-3.2	
W _d	180	2.2	180	2.2	220	4.0	320	1.0	020	2.0
P	26.12		26.12		25.61		25.91		26.24	
C	No		No		60 ☉		No		No	
M					No					
T _{a25}					19.5					
T _{dp25}					-5.9					
I	100.74		100.74		94.13		101.11		94.67	
I _a	77.49		77.49		80.76		77.46		73.52	
I _d	59.49		59.49		53.35		51.10		48.11	
N	103.83		103.83		92.31		98.38		99.16	
N _a	78.54		78.54		72.80		70.91		72.63	
N _b	69.86		69.86		68.48		65.05		65.43	
N _c	60.03		60.03		54.79		53.74		57.02	
N _d	53.00		53.00		43.15		46.06		49.82	
i	missing		56.66		7.34		3.98		26.22	
i _a	49.08		43.47		5.53		2.79		22.97	
i _d	27.67		25.64		4.25		0.70		17.29	
T _{g/w}	33.0		33.0		34.3		12.0		missing	
T _s	33.0		33.0		45.0				46.2	
ψ	19.1		19.2						0.5	
ε										
E _l , A _z	62.5	165.4	62.5	165.2	62.0	166.0	62.0	163.8	63.0	165.0

REMARKS:

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 6 April 77 TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II		METSAT III		METSAT IV	
T ^a	18.3		18.3		22.4		17.5		22.8	
T _{dp}	-3.8		-3.8		-2.1		1.1		-2.7	
W _d , W _s	180	2.2	180	2.2	200	2.2	360	1.0	020	2.0
C	26.14		26.14		25.61		25.83		26.22	
	○		○		60 ○		○		○	
T _{a25}	No		No		No		No		No	
T _{dp25}					19.8					
					7.9					
l	101.58		101.58		94.95		101.26		95.54	
I ^a	78.35		78.35		81.29		77.46		73.87	
I _d	59.85		59.85		53.16		51.00		48.11	
N	104.21		104.21		100.19		98.59		97.60	
N ^a	78.54		78.54		75.98		70.71		71.43	
N _b	71.90		71.90		70.73		65.05		64.47	
N _c	57.98		57.98		58.16		53.74		55.94	
N _d	53.38		53.38		48.78		46.06		48.74	
i	missing		56.88		7.46		4.17		26.01	
i ^a	49.54		43.67		5.53		2.79		22.49	
i _d	28.00		25.85		4.45		0.50		17.05	
T _{g/w}	32.9		36.8		36.4		12.0		missing	
T _s	32.8		35.0		46.0				45.8	
ε	19.1		19.2						0.5	
El, Az	63.2	175.7	63.2	175.7	62.6	176.1	62.8	173.8	63.7	175.4
REMARKS:										

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: l = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ε = Soil Moisture (%); c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE 6 April 77

RADIOSONDE: (0843 MST) TTAA 56161 72HMS 99884 13667 00000 00224 /////
 // 85590 12667 17005 70190 01463 13514 50581 15968 28520 40746 28566
 28037 30945 451// 28043 25065 543// 28047 20206 579// 27547 15387 605//
 28049 10637 643// 28030 88213 587// 27547 77147 28050 40808

TTBB 5616/ 72HMS 00884 13667 11874 12467 22850 12567 33756 07665 44683
 00562 55607 07564 66587 07168 77528 13568 88470 18567 99400 28566 11355
 35764 22238 563// 33213 587// 44166 537// 55100 643//

TTCC 56162 72HMS 70855 635// 29520 50064 615// 25009 30392 521// 26010
 20655 489// 24516 88999 77999

TTDD 5616/ 72HMS 11912 659// 22700 635// 33656 601// 44500 615// 55440
 547// 66362 515// 77243 535// 88159 467//

ROCKETSONDE: (1331 MST) RRXX 06203 72269 81010 16101 25551 25011 28549
 27012 30542 29015 31539 28014 35539 27025 37534 28029 40518 27018 41513
 25015 45505 25030 47503 26033 50508 28029 51509 26030 52508 25030 54506
 24012 55511 23011 56515 24011 57512 26012 58511 28013 60516 04004 61519
 06013 62523 09011 63526 17007 65534 00012 66539 04022 6*** 06026 69***
 14018

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 12 April 77

TIME 1106 (Local) 1806 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 111	METSAT 1V
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	20.8 -4.1 060 1.3 25.93 ○ No	20.8 -4.1 060 1.3 25.93 ○ No	21.3 -4.9 190 4.5 25.42 ○ No 21.0 8.9		22.3 -4.6 CALM 26.02 ○ No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	100.42 76.96 50.85 98.86 73.51 67.55 56.53 49.18 missing 43.06 28.22	100.42 76.96 50.85 98.86 73.51 67.55 56.53 49.18 54.72 41.74 24.68	94.04 80.11 55.27 99.06 76.17 70.17 58.35 48.97 7.34 5.33 4.25		95.43 75.15 47.45 97.24 71.19 64.11 55.70 48.62 25.91 21.89 16.81
$T_{E/W}$ T_s γ c E, Az	34.0 33.0 19.5 61.8 147.1	37.9 38.2 19.2 61.8 147.1	34.5 34.0 61.4 148.0		missing 40.6 0.5 62.2 146.4
REMARKS: MET SAT III - Not operated this day					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
 Normal Incoming: $R = \text{RG280}, R_a = \text{GG495}, R_d = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_d = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{E/W}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); γ = Soil Moisture (%)
 c = Emissivity (%); E, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 12 April 77

RADIOSONDE: (0900 MST) TTAA 62161 72HMS 99877 16071 00000 00164
 ///// ///// 85528 15069 02503 70139 02066 23511 50577 16165 22033
 40741 28962 22537 30941 449// 22547 25060 551// 22550 20200 619//
 22545 15381 589// 24036 10636 583// 22516 88196 625// 22542 77222
 22557 41116

TTBB 6216/ 72HMS 00877 16071 11858 12869 22850 15069 33769 09468
 44690 00865 55641 01371 66585 07749 09369 88500 16165 99475 17767
 11400 28962 22387 29763 33335 38361 44250 551// 55196 625// 66176
 567// 77135 607// 88122 599// 99111 553// 11100 583// 51515 10186
 //700 02066 SUPER 70-69

TTCC 62163 72HMS 70857 625// 23012 50066 585// 23506 30392 549//
 24514 88999 77999

TTDD 6216/ 72HMS 11853 637// 22808 609// 33700 625// 44323 535//
 55212 517// 51515 10190 20653

ROCKETSONDE: (1000 MST) RRXX 12173 72269 81010 13101 25559 26010
 30552 26013 35538 25021 40528 28021 42519 27012 43514 25008 45516
 26016 47508 25024 49513 28023 50509 28022 51511 29023 52513 30016
 53515 03001 55512 15010 57519 22003 58522 22014 59526 20024 60///
 20019 61/// 28014 62/// 31023 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 13 April 77

TIME 0910 (Local) 1610 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	12.3 5.5 310 2.2 25.91 E50 (II) Yes	12.3 5.5 310 2.2 25.91 E50 (II) Yes		12.9 -0.1 020 4.0 25.58 O Yes	18.0 9.1 350 1.5 25.98 E45 (II) Yes
I I_a I_d N N_a N_b N_c N_d i i_a i_d	73.20 62.71 29.77 36.72 30.77 missing	73.20 62.71 29.77 18.73 11.45 5.51		71.93 54.18 35.27 85.45 62.63 57.37 47.47 40.00	39.39 30.31 19.09 39.14 32.77 26.29 20.65 18.73
$T_{g/w}$ T_s ψ ϵ E_l, Az	12.9 18.5 24.4 42.8 110.7	16.3 19.0 21.2 42.8 110.7		13.2 42.0 110.3	20.3 30.2 1.0 43.0 110.2

REMARKS: MET SAT I - No normal incoming data due to clouds.

MET SAT II - Not operated this day due to inclement weather.

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.
 Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
 pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25
 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 13 April 77 TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A		METSAT I-B		METSAT II	METSAT III		METSAT IV	
T _a	20.8		20.8			20.0		22.8	
T _{dp}	8.9		8.9			6.7		9.2	
W _d	220	1.8	220	1.8		CALM	360	2.6	
P	25.83		25.83			25.51		25.90	
C	60 (D)		60 (D)			E60 (D)		E50 (D)	
M	Yes		Yes			Yes		Yes	
T _{a25}									
T _{dp25}									
I	98.53		98.53			22.77		122.74	
I _a	75.78		75.78			15.97		97.10	
I _d	48.41		48.41			9.72		40.83	
N	90.04		90.04						
N _a	67.69		67.69						
N _b	61.56		61.56						
N _c	51.72		51.72						
N _d	45.08		45.08						
i	41.62		45.65			0.78		16.44	
i _a	30.88		32.23			0.41		12.21	
i _d	missing		17.69			0.30		7.74	
T _{g/w}	37.5		30.3			16.0		22.3	
T _s	29.0		29.0					38.0	
ψ	24.4		21.2					1.0	
c									
EI, Az	65.8	176.5	65.8	176.5		65.4	174.5	66.3	176.2
REMARKS: MET SAT II - Not operated this day due to inclement weather MET SAT III, IV - No normal incoming data due to clouds									

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W = Wind Direction (deg. Wind Speed (m/s)); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emisivity (%); EI, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 13 April 77

TIME 1326 (Local) 2026 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s P_s C M T_{a25} T_{dp25}	23.5 9.5 060 3.1 25.76 E50 \oplus Yes	23.5 9.5 060 3.1 25.76 E50 \oplus Yes			27.1 8.8 120 4.1 25.85 E50 \oplus Yes
I I_a I_d N N_a N_b N_c N_d	98.63 74.60 47.25 90.93 68.07 61.69 51.47 44.57	98.63 74.60 47.25 90.93 68.07 61.69 51.47 44.57			25.68 18.23 11.34
i i_a i_d	MISSING 28.99 MISSING	34.52 32.93 18.11			6.76 5.08 4.23
$T_{g/w}$ T_s ψ ϵ E_l, A_z	34.9 31.0 24.4 59.6 222.0	37.4 32.0 21.2 59.6 222.0			17.9 33.5 1.0 60.0 222.4
REMARKS: METSAT II - Not operated this day due to inclement weather METSAT III - Site not operated for this observation METSAT IV - No normal incoming data due to clouds					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (hPa); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 13 April 77

RADIOSONDE: (0800 MST) TTAA 63151 72HMS 99875 09802 00134 /////
 85504 13459 09014 70113 02831 18515 50574 16760 21025 40738 29359 21521
 30936 455// 19519 25055 559// 18524 20194 647// 20540 15374 549// 24025
 10630 619// 23019 88202 651// 20039 77197 20542 41421

TTBB 6315/ 72HMS 00875 09802 11854 13658 22818 13060 33745 06458 44668
 00401 55628 03357 66602 06719 77571 08559 88466 20362 99458 20770 11429
 24768 22408 27758 33400 29359 44393 30159 55387 30768 66374 32967 77225
 613// 88200 647// 99184 635// 11170 581// 22150 549// 33115 577// 44100
 619// 51515 SUPER 63-60 41-40

TTCC 63152 72HMS 70850 637// 25509 50059 585// 25507 30383 537// 25515
 20646 501// 27520 88999 77999

TTDD 6315/ 72HMS 11880 639// 22792 599// 33700 637// 44654 609// 55578
 619// 66500 585// 77388 575// 88326 531// 99168 497//

ROCKETSONDE: (1105 MST) RRXX 13181 72269 81010 13101 25553 27010 30545
 24018 35536 27021 40521 28015 42515 25019 45507 26013 46509 28009 47510
 28008 48507 26018 49504 26024 50508 26022 51505 26020 52501 27017 53501
 29004 55510 30004 56516 33009 57515 07005 58515 16021 59517 17027 60516
 15017 61520 20006 62525 26013 63528 24007 65531 20009 66534 32005 67538
 01016 68542 03020 70*** 06032 72*** 10022 *****

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 20 April 77

TIME 0909 (Local) 1609 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d , W _s P C M T _{a25} T _{dp25}	14.7 8.4 070 3.6 25.90 500E200 Yes	14.7 8.4 070 3.6 25.90 500E200 Yes	13.6 5.0 030 3.0 25.22 400E100 Yes		14.8 4.5 200 8.2 25.86 500 Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d	77.21 56.16 34.22 84.42 63.09 57.47 48.02 41.25 missing 25.63 19.34	77.21 56.16 34.22 84.42 63.09 57.47 48.02 41.25 43.57 34.00 21.56	64.86 33.20 25.48 26.27 13.13 14.45 17.07 14.07 missing missing missing		71.49 57.14 37.35 89.08 65.67 59.66 51.14 44.66 19.98 18.14 13.66
T _{g/w} T _s Ψ _s ε	missing 20.7 26.1	missing 21.5 23.8	17.0 20.0		12.5 26.4 missing
E1, Az	44.5 108.1	44.5 108.1	44.4 108.8		44.6 107.5
REMARKS: MET SAT III - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s)); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (°C)
ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 20 April 77 TIME 1200 (Local) 1900 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}					21.2 -0.4 210 6.2 25.83 E70 \oplus Yes
I I_a I_d N N_a N_b N_c N_d i i_a i_d					108.60 87.69 57.28 90.40 66.15 59.42 51.26 44.66 29.14 26.60 19.83
$T_{g/w}$ T_s ψ ϵ E_i, A_z					18.5 36.4 missing 68.8 177.0

REMARKS: MET SAT I,II - No observation this period due to inclement weather
MET SAT III - Not operated this day

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_i, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 20 April 77

TIME 1256 (Local) 1956 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 1I	METSAT 11I	METSAT 1V
T_a T_{dp} W_d, W_s C M T_{a25} T_{dp25}					20.8 -4.0 205 25.81 E70 \odot Yes 5.1
I_a I_d N N_a N_b N_c N_d i i_a i_d					21.76 16.02 10.11 5.52 4.23 3.63
$T_{g/w}$ T_s ψ ϵ E_l, A_z					34.8 43.8 missing 65.7 212.2
REMARKS: MET SAT I,II - No observation this period due to inclement weather MET SAT III - Not operated this day MET SAT IV - No normal incoming data due to cloudiness					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_d = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 20 April 77

RADIOSONDE: (0800 MST) TTAA 70151 72HMS 99871 11022 00000 00084 /////
 ///// 85458 09245 24002 70039 01156 23523 50561 21356 21036 40722 33757
 21539 30918 483// 20542 25036 541// 23554 20178 581// 23557 15362 523//
 24037 10620 587// 19522 88187 593// 23062 77187 23062 40709

TTBB 7015/ 72HMS 00871 11022 11861 10057 22814 07446 33803 06859 44676
 03556 55624 10126 66607 11511 77546 17756 88511 19744 99478 23358 11400
 33757 22349 409// 33313 471// 44250 541// 55225 533// 66187 593// 77179
 543// 88162 517// 99136 529// 11114 585// 22100 587// 51515 SUPER 67-62

TTCC 70153 72HMS 70841 625// 22530 50051 615// 25002 30371 561// 24515
 88999 77999

TTDD 7015/ 72HMS 11813 633// 22758 605// 33700 625// 44593 581// 55475
 635// 66278 527// 77205 523// 51515 10190 20632

ROCKETSONDE: (1030 MST) RRXX 20173 72269 80100 01201 21/// 06002 25///
 24004 30/// 25004 32/// 24013 35/// 28011 40/// 30016 41/// 31008 43///
 03009 45/// 16004 49/// 20015 50/// 19008 51/// 34009 52/// 34017 55***
 23009 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 21 April 77

TIME 0909 (Local) 1609 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT III	METSAT III	METSAT IV
T ^a T _{dp} ^a W _d ^a , W _s ^a C T _{a25} ^M T _{dp25}			15.1 0.3 CALM 25.48 ○ Yes 15.4 1.1		12.7 3.4 CALM 26.17 ○ Yes
I _a I _d N _a N _b N _c N _d i _a i _d			70.92 58.37 36.30 88.18 67.73 62.85 52.53 41.90 3.55 3.02 2.02		70.84 56.45 36.58 87.76 65.19 59.18 51.02 44.66 20.50 18.02 13.54
T _{g/w} T _s V ε El, Az			20.2 27.0 44.6 108.4		26.8 27.3 2.9 44.8 107.2
REMARKS: MET SAT I - Not operated this day MET SAT III - Not operated this day					

LEGEND

T^a = Air Temperature (°C); T_{dp}^a = Dew Point Temperature (°C); W_d^a, W_s^a = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}^M, T_{dp25}^M = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); V = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 21 April 77

RADIOSONDE: (0900 MST) TTAA 71161 72HMS 99880 12261 00000 00186 /////
///// 85548 07461 18004 70132 01959 31513 50572 19362 32033 40734 33762
34028 30826 493// 32045 25057 545// 33051 20198 561// 29040 15381 561//
26531 10638 587// 26531 88211 587// 31046 77165 28056

TTBB 7116/ 72HMS 00880 12261 11870 09461 22850 07461 33820 07664 44710
00760 55678 04357 66667 05750 77619 08560 88532 15764 99400 33762 11368
38961 22312 477// 33288 515// 44211 587// 55200 561// 66160 545// 77153
557// 88135 575// 99112 555// 11100 587// 51515 SUPER 68-67

TTCC 7116/ 72HMS 88999 77999

TTDD 7116/ 72HMS 11893 583// 22803 609// 33743 597// 51515 10190 70861

ROCKETSONDE: NONE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 22 April 77

TIME 0858 (Local) 1558 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	13.0	13.0	17.2		16.7
T _{dp} ^a	4.9	4.9	2.6		4.2
W _d ^a	CALM	CALM	350	0.9	CALM
P _s	26.26	26.26	25.89		26.24
C	220 - (D)	220 - (D)	240 - (D)		250 - (D)
M	No	No	No		No
T _{a25}			17.2		
T _{dp25}			2.3		
I	67.65	67.65	70.64		68.55
I ^a	49.52	49.52	59.16		55.17
I _d	32.63	32.63	40.52		48.67
N	72.54	72.54	87.24		86.43
N ^a	53.77	53.77	68.11		63.87
N ^b	54.66	54.66	60.98		57.38
N ^c	47.64	47.64	50.84		48.86
N _d	41.63	41.63	42.40		42.38
i	missing	39.93	4.73		19.25
i ^a	missing	29.58	3.52		17.29
i _d	missing	18.64	2.62		13.18
T _{g/w}	11.5	13.0	missing		31.5
T _s	18.7	17.1	35.0		31.3
ψ	16.6	17.2			missing
ε					
E _i , A _z	42.9 105.4	42.9 105.4	42.9 106.1		43.0 104.9
REMARKS: MET SAT III - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E_i, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 22 April 77

TIME 1118 (Local) 1818 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	20.3 7.1 120 4.0 26.23 220 - \oplus No No	20.3 7.1 120 4.0 26.23 220 - \oplus No	21.5 0.7 220 1.8 25.59 240 - \oplus No 20.2 1.7		23.8 1.9 235 1.5 26.19 250 - \oplus No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	105.46 82.74 53.39 92.46 68.71 63.86 53.26 46.23 49.82 41.16 35.00	105.46 82.74 53.39 92.46 68.71 63.86 53.26 46.23 60.98 46.10 28.64	96.70 83.00 57.47 97.75 73.36 67.92 56.85 47.84 7.34 5.43 4.15		101.20 76.66 48.77 72.87 58.10 50.18 39.02 35.77 24.35 19.95 15.84
$T_{g/w}$ T_s ψ ϵ E_l, Az	20.5 28.2 16.6 66.6 150.9	21.5 30.0 17.2 66.6 150.9	missing 43.2 66.1 151.9		49.9 47.6 missing 67.0 150.1

REMARKS: MET SAT III - Not operated this day

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.
 Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Preci-
 pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25
 meter height.

Radiant Flux:

Global Incoming: I = WG280, I_a = GG495, I_d = RG695
 Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
 Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 22 April 77

RADIOSONDE: (0830 MST) TTAA 72161 72HMS 99883 15062 30004 00217 /////
 ///// 85090 11663 27004 70185 03065 33004 50581 16063 31016 40744 29363
 31522 30943 419// 30535 25064 529// 29054 20204 659// 28080 15378 629//
 28546 10629 607// 28035 88182 695// 29058 77200 28080 43323

TTBB 7216/ 72HMS 00883 15062 11865 12263 22802 10264 33575 09565 44567
 09566 55400 29363 66335 38361 77300 419// 88182 695// 99168 691// 11161
 643// 22100 607//

TTCC 72161 72HMS 70852 615// 26020 50062 627// 10006 30383 543// 04002
 20633 513// 16008 10092 407// 240// 07337 357// 235// 88959 77999

TTDD 7216/ 72HMS 11883 589// 22700 615// 33634 579// 44500 627// 55398
 575// 66358 581// 77300 541// 88258 551// 99111 451// 11100 401// 22063
 347//

ROCKETSONDE: (1109 MST) RRXX 22181 72269 81010 13101 25555 05001 30545
 23007 35534 23015 36529 26019 37531 27022 38528 28021 39519 26009 40513
 17012 41514 18018 42514 19015 43512 24008 45508 07003 46504 03011 47505
 08016 48505 10010 50505 19021 51505 15014 52508 12025 55512 15030 56514
 15037 57517 14038 58520 15030 59523 19023 60526 20041 61527 20044 62529
 22016 63532 10013 64532 10038 65*** 08063 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA v

DATE OF OBSERVATION 26 April 77

TIME 1022 (Local) 1622 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d W_s P C M T_{a25} T_{dp25}	17.5 8.9 360 2.2 26.08 E110 (D) Yes	17.5 8.9 360 2.2 26.08 E110 (D) Yes	20.9 3.9 190 0.4 25.43 ○ Yes 20.4 5.4		19.6 8.3 360 1.0 26.06 E80 (D) 200 (D) Yes
I I_a I_d N N_a N_b N_c N_d i i_a i_d	47.90 34.83 19.28 25.82 19.05 11.36	47.90 34.83 19.28 25.82 19.05 11.36	73.30 61.26 39.27 88.56 68.29 63.60 52.35 44.28 4.62 3.62 2.63		87.60 70.27 45.65 74.91 57.26 54.86 45.62 39.98 23.73 21.52 16.08
$T_{g/w}$ T_s Ψ ϵ E_i , Az	20.5 27.0 20.0 48.5 108.6	18.0 23.0 18.1 48.5 108.6	28.8 38.4 48.4 109.4		30.2 32.7 missing 48.5 108.0

REMARKS: MET SAT I - No normal incoming data due to clouds
MET SAT I-A - No global outgoing data this day
MET SAT III - Not operated this day

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d , W_s = Wind Direction (deg. Wind Speed (m/s)); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25} , T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_i , Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 26 April 77

RADIOSONDE: (0700 MDT) TTAA 76131 72HMS 99878 10438 00000 00139 /////
 /////
 85528 13459 16505 70141 03442 28006 50578 15757 33154 40742 27758
 29514 30942 435// 31531 25062 535// 31533 20202 617// 31038 15381 631//
 30050 10628 639// 29038 88216 617// 31032 77150 30050 40606

TTBB 7613/ 72HMS 00878 10438 11867 14458 22837 13059 33827 13860 44758
 08460 55731 05850 66668 00637 77639 03110 88630 03140 99615 04156 11526
 12559 22476 18945 33400 27758 44387 30156 55315 40760 66216 617// 77181
 599// 88155 617// 99150 631// 11124 659// 28100 639// 51515 SUPER 40-39

TTCC 76132 72HMS 70848 619// 31529 50055 627// 31021 30374 575// 19003
 20633 525// 26009 88999 77999

TTDD 7613/ 72HMS 11868 647// 22803 611// 33538 647// 44160 481//

ROCKETSONDE: (1000 MDT) RRXX 26164 72269 81010 63101 25/// 26005 30///
 26010 35/// 25016 40/// 27013 45/// 22007 47/// 18014 48/// 17020 49///
 10002 50/// 14004 51/// 16012 52/// 13005 55/// 06006 56/// 10016 60///
 13015 61/// 13020 62/// 14032 63/// 15037 65/// 11014 66/// 08019 68///
 03010 69/// 01010 70/// 35022 71/// 00026 72/// 03023 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 27 April 77

TIME 1224 (Local) 1824 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	25.5	25.5	25.1	21.5	26.1
T_{dp}	8.4	8.4	5.8	11.1	8.2
W_d, W_s	130 4.0	130 4.0	220 5.0	230 2.0	250 2.6
P	26.03	26.03	25.38	25.60	25.98
C	70 \oplus 220- \oplus	70 \oplus 220 \oplus	80 \oplus 230- \oplus	220- \oplus	60 \oplus 220- \oplus
M	No	No	No	No	No
T_{a25}			22.9		
T_{dp25}			5.3		
I	100.21	100.21	94.77	97.35	98.80
I_a	77.60	77.60	80.90	73.58	78.40
I_d	49.58	49.58	54.79	48.30	49.53
N	89.02	89.02	91.37	85.66	86.19
N_a	66.54	66.54	70.73	62.63	63.63
N_b	60.79	60.79	59.85	58.79	60.50
N_c	50.19	50.19	53.85	49.90	49.34
N_d	43.30	43.30	45.22	42.02	43.86
i	46.51	58.02	7.34	3.01	24.25
i_a	36.91	43.57	5.73	2.07	21.28
i_d	26.67	26.70	4.35	0.60	16.20
$T_{g/w}$	35.0	37.5	39.3	16.3	45.9
T_s	33.5	36.8	38.0	16.0	51.5
ψ	14.7	14.9			3.3
E, Az	68.8 153.2	68.8 153.2	68.3 154.2	68.1 151.5	69.2 152.4

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition S (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 c = Emissivity (%); E, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 27 April 77

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	25.5	25.5	25.5	21.0	28.8
T_{dp}	9.3	9.3	5.9	11.0	7.1
W_d, W_s	110 2.7	110 2.7	170 3.1	CALM	140 2.1
P	26.02	26.02	25.37	25.60	25.96
C	70 ⊖ 220- ⊕	70 ⊖ 220- ⊕	80 ⊖ 230- ⊕	220- ⊖	60 ⊖ 220- ⊕
M	No	No	No	No	No
T_{a25}			23.7		
T_{dp25}			6.7		
I	102.84	102.84	96.70	92.60	98.91
I_a	78.99	78.99	82.48	69.85	78.16
I_d	49.26	49.26	55.36	46.09	56.09
N	89.40	89.40	90.81	86.06	82.83
N_a	66.79	66.79	74.86	63.43	61.70
N^a	61.05	61.05	60.41	58.59	58.82
N^b	50.32	50.32	53.66	49.49	48.14
N^c	43.30	43.30	44.84	41.41	41.78
N^d					
i	48.96	59.16	6.98	2.81	23.93
i_a	39.15	44.17	5.43	1.65	20.92
i_d	27.78	27.18	4.24	0.70	15.72
$T_{g/w}$	35.0	37.5	40.0	16.2	49.9
T_s	35.0	38.0	39.5	16.0	52.3
ψ	14.7	14.9			3.3
ϵ					
E_l, A_z	70.7 178.0	70.7 178.0	70.0 178.5	70.3 175.5	71.2 177.7

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg. Wind Speed (m/s)); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N^a = OG530, N^b = RG630, N^c = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 27 April 77

TIME 1327 (Local) 1927 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 1-I	METSAT 1-II	METSAT 1-V
T _a	26.5	26.5	27.0	30.0	30.4
T _{dp}	8.4	8.4	4.8	14.6	7.0
W _d , W _s	120 4.0	120 4.0	230 0.9	130 2.0	180 1.5
P	26.00	26.00	25.34	25.56	25.95
C	70 ⊕ E220 ⊕	70 ⊕ E220 ⊕	80 ⊕ E250 ⊕	70 ⊕ E250 ⊕	60 ⊕ E220 ⊕
T _{a25}	NO	NO	23.5	NO	NO
T _{dp25}			6.0		
I	102.42	102.42	95.78	95.25	97.39
I _a	78.24	78.24	81.42	66.42	75.73
I _d	47.03	47.03	53.07	47.49	49.62
N	88.38	88.38	77.67	62.83	70.59
N _a	65.90	65.90	63.41	46.06	52.46
N _b	60.41	60.41	51.03	43.03	49.94
N _c	49.81	49.81	45.22	28.48	40.94
N _d	42.66	42.66	38.65	25.86	35.77
i	47.74	58.93	7.10	3.39	23.83
i _a	39.15	44.07	5.53	2.48	21.04
i _d	26.67	26.70	4.14	1.01	15.96
T _{g/w}	35.0	37.5	missing	17.3	51.7
T _s	35.0	38.0	39.5		52.3
ψ	14.7	14.9			3.3
ε					
Ei, Az	69.9 197.4	69.9 197.4	69.3 197.3	69.8 194.7	70.4 197.6

REMARKS:

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg. Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 27 April 77

RADIOSONDE: No Flight

ROCKETSONDE: (1200 MDT) RRXX 27182 72269 81010 63101 25554 24007 26549
23007 30545 23014 31540 24018 33539 27017 35529 27020 40519 31009 41511
15001 42510 18010 44505 30002 45508 19002 46503 24005 47003 22006 50501
09012 51503 16010 55512 07006 56510 09009 60520 10017 61523 13008 65536
11013 67/// 10009 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 4 May 1977

TIME 1016 (Local) 1616 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	22.8	22.8	23.1	18.0	23.2
T _{dp}	7.2	7.2	1.9	7.8	5.7
W _d , W _s	210 6.3	210 6.3	200 4.9	CALM	030 1.5
P	26.03	26.03	25.46	25.54	25.93
C	E110 ⊕	E110 ⊕	☉	☉	E70 ⊕ 180 ⊕
M	No	No	No	No	No
T _{a25}			21.5		
T _{dp25}			3.3		
I	99.05	99.05	76.88	78.07	78.45
I _a	78.14	78.14	59.84	60.60	63.30
I _d	48.73	48.73	40.80	37.47	40.26
N	94.38	94.38	94.93	93.74	89.32
N _a	69.99	69.99	72.23	68.69	61.70
N _b	63.35	63.35	67.17	62.63	60.14
N _c	52.23	52.23	55.16	52.32	48.02
N _d	44.57	44.57	47.09	42.02	42.14
i	53.61	56.99	6.51	2.91	23.20
i _a	45.41	43.57	5.03	2.07	20.80
i _d	28.89	26.89	4.04	0.52	15.36
T _{g/w}	34.5	36.3	27.5	17.0	39.6
T _s	28.0	32.0	32.2		36.7
ψ	13.4	8.5			2.1
ε					
E1, Az	48.9 104.5	48.9 104.5	48.8 105.3	48.0 104.2	48.9 103.8
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Landsat B

DATE OF OBSERVATION 4 May 1977

TIME 1040 (Local) 1640 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	23.8	23.8	23.1	18.4	24.1
T _{dp}	6.9	6.9	1.9	7.9	7.3
W _d , W _s	210 10.3612.1	210 10.3612.1	180 4.5	270 2.2	050 1.0
P	26.02	26.02	25.46	25.53	25.93
C	E110 230 ①	E110 230 ①	230 - ①	○	70 ① E180 ①
M	No	No	No	No	No
T _{a25}			21.8		
T _{dp25}			2.4		
I	95.12	95.12	82.84	82.26	91.40
I _a	74.70	74.70	65.05	62.54	68.52
I _d	51.63	51.63	44.35	40.08	44.71
N			96.25	95.96	74.07
N _a			72.80	70.30	44.66
N _b			68.11	64.44	37.33
N _c			55.16	53.94	34.57
N _d			47.47	45.05	25.57
i	55.45	40.61	6.98	2.81	23.77
i _a	49.55	18.84	5.33	1.96	20.80
i _d	12.11	10.10	4.25	0.31	15.11
T _{g/w}	28.3	31.4	29.5	17.0	42.7
T _s	27.0	31.0	32.2		46.0
ψ	13.4	8.5			2.1
ε					
E1, Az	53.7 109.6	53.7 109.6	53.6 110.5	52.9 109.2	53.8 108.8
REMARKS: MET SAT I - No normal incoming data this run due to clouds					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 4 May 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	26.1	26.1	27.1		25.0
T _{dp}	5.4	5.4	1.8		6.8
W _d , W _s	240 7.269.8	240 7.269.8	240 4.5		285 2.1
P	25.98	25.98	25.43		25.89
C	60 ☉ E110 ☉	60 ☉ E110 ☉	120 ☉		550 ☉ E90 ☉
M	No	No	No		No
T _{a25}			24.8		
T _{dp25}			0.9		
I	136.66 *	136.66 *	100.18		81.28
I _a	110.83 *	110.83 *	81.48		71.20
I _d	65.04 *	65.04 *	56.80		45.84
N			99.55		54.62
N _a			74.30		33.25
N _b			69.42		31.09
N _c			56.66		
N _d			48.22		
i	75.89 *	34.13	7.81		15.71
i _a	28.30	21.07	6.13		14.39
i _d	14.00	12.43	4.85		12.82
T _{g/w}	29.1	29.3	34.9		42.2
T _s	41.0	45.0	41.8		41.3
ψ	13.4	8.5			2.1
ε					
El, Az	79.4 167.2	79.4 167.2	78.8 168.5		79.9 166.0
REMARKS: MET SAT I - No normal incoming data this run due to clouds MET SAT II - Not operated this run MET SAT IV - Normal incoming (N _c N _d) readings missing due to clouds METSAT I * - High readings also noted at other times around Noon Run period.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

4 May 1977

RADIOSONDE: (0900 MDT) TTA 54151 72HMS 99878 21266 23005 00128
 // // 85543 18866 21509 70166 05261 25526 50581 13168 27028
 40748 23167 26053 30951 38362 24054 25075 467// 25037 20219 583//
 25052 15395 661// 25060 10648 601// 27512 88162 679// 25057 77178
 25070 41118 Ø

TTBB 5415/ 72HMS 00878 21266 11850 18866 22825 15464 33723 06461
 44700 05261 55666 02461 66575 07734 77568 07759 88553 07960 99526
 10968 11443 17967 22427 19165 33400 23167 44329 34961 55300 38362
 66250 467// 77162 679// 88143 643// 99136 651// 11114 531// 22100
 601// 51515 SUPER 85-82 Ø

TTCC 54152 72HMS 70868 635// 24513 50076 633// 28004 30395 545//
 27509 20658 496// 26015 88999 77999 Ø

TTDD 5415/ 72HMS 11915 635// 22873 609// 33728 645// 44700 635//
 55643 617// 66500 633// 77429 625// 88393 577// 99323 577// 11300
 545// 22200 495// 33160 489// Ø

ROCKETSONDE: (1000 MDT) RRXX 04161 72269 81010 63101 25550 27007
 29542 25007 30536 25008 35523 27010 37513 28007 38513 27009 40003
 33004 41000 02011 45510 17008 46511 23008 47513 31001 48516 06003
 50526 11006 51525 12004 55// 09019 56// 08021 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 5 May 1977

TIME 1203 (Local) 1803 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	20.7	20.7	20.0		20.5
T _{dp}	11.6	11.6	9.0		6.7
W _d , W _s	200 8.0	200 8.0	230 3.6		210 4.1
P	25.98	25.98	25.40		25.85
C	60 120 250	60 120 250	50 210		60 250 -
M	Yes	Yes	Yes		Yes
T _{a25}			21.0		
T _{dp25}			9.7		
I	105.67	105.67	96.51		98.59
I _a	83.07	83.07	76.97		78.16
I _d	45.97	45.97	59.38		49.62
N	92.46	92.46	53.93		92.80
N _a	70.37	70.37	27.70		66.39
N _b	65.39	65.39	22.35		62.91
N _c	55.30	55.30	18.71		51.38
N _d	48.02	48.02	16.18		44.66
i	41.98	51.19	7.10		26.33
i _a	23.50	39.01	5.63		23.70
i _d	14.67	23.98	4.45		17.65
T _{g/w}	20.6	22.9	27.9		37.9
T _s	21.2	22.5	30.0		40.2
ψ	24.4	22.9			2.9
ε					
El, Az	68.5 138.3	68.5 138.3	68.1 139.6		68.9 137.2
REMARKS: MET SAT III - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG730, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 7218

DATE OF OBSERVATION 5 May 1977

TIME 1420 (Local) 2020 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	23.9	23.9	21.2		23.5
T _{dp}	7.7	7.7	7.7		6.7
W _d , W _s	150 4.9	150 4.9	200 3.6		200 3.0
P	25.94	25.94	25.32		25.79
C	60 120 1	60 120 1	50 121 1		60 1
M	Yes	Yes	Yes		Yes
T _{a25}			22.0		
T _{dp25}			8.9		
I	109.14	109.14	62.96		109.79
I _a	86.71	86.71	42.94		88.73
I _d	42.69	42.69	36.42		57.47
N	95.27	95.27			67.47
N _a	71.65	71.65			66.75
N _b	65.90	65.90			63.27
N _c	55.43	55.43			51.38
N _d	25.16	25.16			44.66
i	47.61	57.79	9.23		31.53
i _a	26.85	43.97	6.53		28.78
i _d	15.11	26.89	3.03		21.52
T _{g/w}	30.9	30.5	25.2		51.8
T _s	28.0	29.5	26.1		52.3
ψ	24.4	22.9			1.7
ε					
El, Az	65.5 231.1	65.5 231.1	65.1 230.3		65.9 231.8
REMARKS: MET SAT II - No normal incoming data due to clouds MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

5 May 1977

RADIOSONDE: (0800 MDT) TTAA 55141 72HMS 99871 15065 03002 00058 /////
 // 85469 13657 30502 70067 01411 23511 50570 14724 19530 40735 26147
 18024 30936 42956 18027 25057 507// 19033 20202 543// 23526 15386 561//
 23036 10643 595// 24542 88200 543// 23526 77230 29551 43427 0

TTBB 5514/ 72HMS 00871 15065 11861 14057 22804 10456 33724 02801 44618
 03903 55400 26147 66291 44556 77263 503// 88241 515// 99237 491// 11200
 543// 22173 539// 33154 571// 44129 569// 55121 557// 66100 595// 0

TTCC 55141 72HMS 70861 621// 23512 50070 615// 08512 30391 545// 22009
 20653 507// 29511 10115 401// 28014 88999 77999 0

TTDD 5514/ 72HMS 11761 679// 22700 621// 33500 615// 44200 507// 55173
 479// 66100 401// 77078 381// 51515 10190 07355 0

ROCKETSONDE: (1200 MDT) RRXX 05180 72269 81010 63101 25551 26006 29544
 25006 30539 25006 35528 27007 40517 04006 41509 08008 45505 11009 48001
 08017 49501 09017 50502 09013 51503 09010 52505 12020 53506 13027 55505
 13020 56507 14026 57509 14027 58512 15020 59514 09007 60517 05016 62523
 10033 65532 08026 66536 09023 68*** 06007 *****

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 10 May 1977

TIME 0946 (Local) 1546 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	22.1	22.1	22.2		22.2
T _{dp}	1.0	1.0	-1.8		1.4
W _d , W _s	220 10.0	220 10.0	180 4.0		310 4.1
P	25.99	25.99	25.43		25.89
C	120 ⊕	120 ⊕	120 ⊕		80 ⊕
M	No	No	No		No
T _{a25}			22.0		
T _{dp25}			1.6		
I	75.32	75.32	70.46		70.29
I _a	58.52	58.52	53.47		58.89
I _d	31.67	31.67	36.59		38.19
N	90.93	90.93	93.25		88.00
N _a	67.43	67.43	74.86		64.11
N _b	62.20	62.20	65.85		60.74
N _c	51.60	51.60	55.16		49.82
N _d	42.27	42.27	46.34		43.58
i	37.33	42.43	5.92		21.33
i _a	missing	32.21	4.52		19.23
i _d	20.78	20.00	3.54		14.27
T _{g/w}	22.0	23.5	28.4		32.8
T _s	23.5	24.0	29.2		32.8
ψ	19.4	20.2			1.8
ε					
El, Az	43.6 97.1	43.6 97.1	43.6 97.8		43.6 96.6
REMARKS: MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Landsat A

DATE OF OBSERVATION 10 May 1977

TIME 0957 (Local) 1557 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	22.3	22.3	22.2		22.2
T _{dp}	0.7	0.7	-0.4		1.0
W _d , W _s	230 9.8	230 9.8	180 3.1		300 4.1
P	25.99	25.99	25.45		25.84
C	120 ⊕	120 ⊕	120 ⊕		80 ⊕
M	No	No	No		No
T _{a25}			22.0		
T _{dp25}			1.6		
I	78.78	78.78	73.39		77.80
I _a	60.99	60.99	56.25		61.44
I _d	32.84	32.84	38.03		39.89
N	91.31	91.31	94.18		89.32
N _a	68.33	68.33	75.05		64.71
N _b	62.58	62.58	66.79		61.46
N _c	51.85	51.85	55.53		50.54
N _d	44.57	44.57	46.34		44.06
i	38.80	44.37	6.27		22.27
i _a	missing	33.74	4.72		20.19
i _d	21.44	20.87	3.74		14.99
T _{g/w}	21.9	23.5	29.0		35.1
T _s	23.5	24.0	29.2		34.7
ψ	19.4	20.2			1.8
ε					
El, Az	45.9 98.9	45.9 98.9	45.9 99.6		45.9 98.3
REMARKS: Met Sat III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = OG530, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);

ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 10 May 1977

TIME 1209 (Local) 1809 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	24.8	24.8	26.3		24.9
T _{dp}	4.3	4.3	6.0		2.5
W _d , W _s	100 2.7	100 2.7	220 3.6		185 3.6
P	25.98	25.98	25.39		25.86
C	○	○	120 ①		○
M	No	No	No		No
T _{a25}			25.0		
T _{dp25}			1.5		
I	104.52	104.52	98.17		100.54
I _a	81.24	81.24	79.51		80.37
I _d	46.82	46.82	54.69		51.32
N	97.45	97.45	99.44		95.32
N _a	71.14	71.14	76.92		68.43
N _b	65.52	65.52	69.42		64.47
N _c	54.02	54.02	58.16		52.94
N _d	46.62	46.62	48.97		46.22
i	49.45	58.82	7.22		27.47
i _a	missing	44.48	5.53		24.79
i _d	28.00	20.06	4.45		18.62
T _{g/w}	38.5	37.9	35.1		46.8
T _s	37.0	43.0	42.1		45.3
ψ	19.4	20.2			
ε					
E _l , A _z	70.5 139.6	70.5 139.6	70.1 141.0		70.9 138.4
REMARKS: MET SAT III - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 10 May 1977

RADIOSONDE: (0900 MDT) TTAA 60151 72HMS 99872 21471 25006 00068 /////
 /////
 85488 17665 25510 70104 03861 26006 50576 11763 21524 40742 26961
 22017 30942 433// 23514 25062 521// 24524 20204 567// 24026 15385 585//
 24533 10637 631// 23017 88188 595// 23531 77477 21535 40811 0

TTBB 6015/ 72HMS 00872 21471 11850 17665 22709 04462 33650 00661 44624
 00761 55580 05941 66563 07150 77546 07562 88521 09364 99400 26961 11325
 39959 22232 557// 33221 569// 44200 567// 55188 595// 66158 581// 77127
 579// 88103 635// 99100 631// 0

TTCC 60152 72HMS 70858 633// 32003 50067 587// 10510 30391 527// 21504
 20656 483// 77999 88999 0

TTDD 6015/ 72HMS 11938 607// 22878 609// 33700 633// 44598 603// 55553
 623// 66423 559// 77368 571// 88233 99153 439// 0

ROCKETSONDE: (1200 MDT) RRXX 10180 72269 81010 63101 23*** 35002 24556
 05001 25553 12003 27546 17005 30544 29002 31543 30003 32541 27001 33532
 18003 35529 16006 38527 12004 40514 11007 41514 07008 44500 12019 45500
 12020 50506 14024 52508 15017 53508 15017 55507 10029 56510 09025 57512
 09029 58514 10041 59516 11038 60519 13022 61522 11013 62524 08026 63527
 08040 64530 10038 65533 12024 66537 12011 67541 08010 69552 04027 70***
 03029 71*** 01031 72*** 35033 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 11 May 1977

TIME 1013 (Local) 1613 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	20.2	20.2	20.8	17.6	21.5
T _{dp}	6.5	6.5	0.1	-5.7	1.7
W _d , W _s	240 2.0	240 2.0	190 2.7	CALM	215 1.0
P	26.06	26.06	25.51	25.56	25.95
C	220 - ①	220 - ①	240 - ①	250 - ①	230 - ①
M	No	No	No	No	No
T _{a25}			22.0		
T _{dp25}			3.1		
I	82.25	82.25	78.62	84.92	79.11
I _a	62.81	62.81	61.46	64.78	62.72
I _d	41.84	41.84	41.38	42.59	41.02
N	93.74	93.74	95.50	94.14	90.76
N _a	69.86	69.86	73.36	69.29	66.15
N _b	63.73	63.73	67.54	63.43	62.55
N _c	53.00	53.00	56.29	52.93	51.62
N _d	45.98	45.98	47.47	44.04	45.14
i	36.47	45.40	5.92	3.00	21.54
i _a	missing	34.14	4.52	2.59	19.35
i _d	20.34	21.36	3.64	1.01	14.87
T _{g/w}	27.8	30.3	28.9	17.7	35.3
T _s	38.8	41.0	31.0		39.6
ψ	13.8	14.2			1.0
ε					
E1, Az	49.3 101.5	49.3 101.5	49.3 102.2	48.5 101.2	49.4 100.8
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 11 May 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	25.5	25.5	27.7		29.0
T _{dp}	-2.5	-2.5	-2.7		2.3
W _d , W _s	010 3.0	010 3.0	190 4.5		205 2.1
P	26.03	26.03	25.46		25.90
C	E200 - ⊕	E200 - ⊕	E240 - ⊕		E230 - ⊕
M	No	No	No		No
T _{a25}			24.5		
T _{dp25}			-3.5		
I	105.15	105.15	100.73		100.44
I _a	78.99	78.99	82.75		77.00
I _d	51.69	51.69	55.94		52.36
N	80.20	80.20	97.56		93.64
N _a	58.75	58.75	74.30		67.83
N _b	50.19	50.19	68.86		63.75
N _c	38.31	38.31	56.66		52.70
N _d	35.38	35.38	48.03		46.34
i	44.19	54.83	7.10		27.47
i _a	37.97	41.34	5.43		24.23
i _d	26.44	26.60	4.45		18.62
T _{g/w}	39.8	39.8	39.0		46.4
T _s	40.5	40.5	41.0		50.2
ψ	13.8	14.2			1.0
ε					
El, Az	74.8 178.8	74.8 178.8	74.2 179.3		75.3 178.4
REMARKS: MET SAT III - Not operated during this observation period.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 11 May 1977

TIME 1309 (Local) 2009 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	28.3	28.3	27.3		29.3
T _{dp}	-1.1	-1.1	-4.3		8.1
W _d , W _s	180 2.0	180 2.0	220 5.4		220 3.1
P	26.01	26.01	25.46		25.88
C	E250 - ⊕	E250 - ⊕	70 ⊕ E240 - ⊕		65 ⊕ E230 - ⊕
M	No	No	No		No
T _{a25}			25.0		
T _{dp25}			-2.2		
I	80.36	80.36	91.56		96.52
I _a	57.23	57.23	79.51		77.00
I _d	40.15	40.15	49.43		50.47
N	71.01	71.01	72.61		93.40
N _a	57.73	57.73	52.53		67.11
N _b	54.41	54.41	50.66		63.51
N _c	44.70	44.70	42.03		51.98
N _d	35.63	35.63	35.83		45.38
i	45.78	45.85	7.34		27.06
i _a	36.55	34.25	5.63		24.43
i _d	27.56	27.18	4.55		18.62
T _{g/w}	35.0	39.8	37.8		48.0
T _s	39.6	46.0	43.0		52.0
ψ	13.8	14.2			1.0
ε					
E1, Az	68.5 229.1	68.5 229.1	67.0 228.2		68.9 229.9
REMARKS: MET SAT III - Not operated during this observation period.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 11 May 1977

RADIOSONDE: (0800 MDT) TTAA 61141 72HMS 99873 15260 11002 00089
 ///// ///// 85484 18262 17005 70011 07063 24517 50568 09564 24527
 40737 20963 23513 30942 37160 23013 25066 463// 26021 20211 555//
 26040 15394 513// 23525 10657 513// 23027 88189 575// 26042 77189
 26043 40807 Ø

TTBB 6117/ 72HMS 00873 15260 11855 14061 22850 18262 33772 13265
 44700 07063 55608 00734 66582 03558 77567 04164 88521 07564 99500
 09564 11400 20963 22281 40360 33189 575// 44174 585// 55169 545//
 66160 513// 77100 513// Ø

TTCC 61142 72HMS 70885 545// 20515 50103 529// 11506 30441 439//
 23008 20715 399// 22512 88999 77999 Ø

TTDD 6114/ 72HMS 11763 573// 22700 545// 33663 519// 44500 529//
 55403 467// 66300 439// 77248 441// 88162 367// Ø

ROCKETSONDE: (1225 MDT) RRXX 11183 72269 81010 63101 25549 21007
 30542 18008 31543 18008 33536 24009 35532 03003 37524 12013 40511
 13015 42512 10015 45502 11013 47504 12023 48503 13023 50501 09018
 52502 10026 53504 09032 55507 10025 60519 12036 61521 13039 62524
 13032 63527 12021 65534 13031 66538 12021 67542 09014 70560 07030
 72/// 08040 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 17 May 1977

TIME 1029 (Local) 1629 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	22.9	22.9	23.0		21.2
T _{dp} ^a	-1.0	-1.0	-6.9		0.1
W _d ^a , W _s ^a	110 4.5	110 4.5	180 5.4		240 0.9
P	26.04	26.04	25.48		25.92
C	○	○	○		○
M	No	No	No		No
T _{a25}			21.8		
T _{dp25}			-7.3		
I	86.87	86.87	83.49		84.87
I ^a	67.42	67.42	66.09		66.43
I _d	45.02	45.02	44.44		44.80
N	92.46	92.46	93.06		88.96
N ^a	68.84	68.84	71.67		65.31
N ^b	63.22	63.22	66.98		61.70
N ^c	51.60	51.60	55.16		51.50
N _d	45.34	45.34	47.65		45.02
i	43.82	48.81	6.86		24.04
i ^a	37.32	36.88	5.33		21.77
i _d	25.00	23.11	4.35		16.69
T _{g/w}	28.1	32.9	29.7		37.3
T _s	27.5	32.0	33.5		36.2
ψ	20.2	16.8			0.7
ε					
El, Az	53.4 102.4	53.4 102.4	53.3 103.4		53.4 101.7
REMARKS: MET SAT III - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N_d = OG530, N^c = RG630, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 17 May 1977

TIME 1358 (Local) 1958 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	27.8	27.8	26.0		27.2
T_{dp}	-0.6	-0.6	-3.8		-5.0
W_d, W_s	170 4.5	170 4.5	190 5.4		200 5.1
P	25.98	25.98	25.44		25.87
C	○	○	○		○
M	No	No	No		No
T_{a25}			24.0		
T_{dp25}			-5.5		
I	103.89	103.89	98.44		99.56
I_a	81.35	81.35	61.83		80.49
I_d	52.54	52.54	54.69		52.55
N	92.59	92.59	96.81		91.24
N_a	69.86	69.86	73.55		65.67
N_b	63.86	63.86	68.29		62.06
N_c	51.21	51.21	55.72		51.26
N_d	42.47	42.47	47.84		45.14
i	52.88	57.91	7.46		28.10
i_a	44.79	44.28	5.73		25.51
i_d	29.67	27.38	4.55		19.47
$T_{g/w}$	35.0	37.5	37.2		47.2
T_s	33.5	38.5	40.3		44.3
ψ	20.2	16.8			0.7
ϵ					
El, Az	71.3 226.2	71.3 226.2	70.8 225.2		71.7 227.1
REMARKS: MET SAT III - Not operated this day					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 17 May 1977

RADIOSONDE: No Flight this day.

ROCKETSONDE: (1300 MDT) RRXX 17190 72269 81010 63101 25/// 09002
30/// 08005 32/// 24000 35/// 04008 37/// 05007 40/// 08019 41///
11018 42/// 12012 45/// 09015 46/// 08023 50/// 15018 51/// 15021
52/// 15018 53/// 14007 54/// 08004 55/// 03015 56/// 04027 58///
07030 60/// 09044 62/// 10037 65/// 12042 66/// 11031 69/// 10016
70/// 05022 72*** 05063 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 18 May 1977 TIME 1158 (Local) 1758 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	25.0	25.0	24.6		25.7
T _{dp}	-12.7	-12.7	-13.4		-9.6
W _d , W _s	230 9.0	230 9.0	180 4.5		210 9.4
P	25.99	25.99	25.44		25.89
C	○	○	250-①		○
M	No	No	No		No
T _{a25}			22.8		
T _{dp25}			-7.8		
I	105.25	105.25	99.08		101.96
I _a	83.92	83.92	81.02		81.07
I _d	54.34	54.34	55.46		53.02
N	96.42	96.42	61.94		94.48
N _a	68.97	68.97	46.82		68.19
N _b	62.32	62.32	43.70		64.47
N _c	52.62	52.62	35.89		53.30
N _d	44.44	44.44	30.89		46.58
i	55.69	58.97	7.93		28.51
i _a	47.23	56.80	6.13		25.88
i _d	31.11	28.45	4.85		19.71
T _{g/w}	31.2	32.0	32.7		46.4
T _s	29.0	33.0	35.5		42.0
ψ	17.2	16.7			0.7
ε					
El, Az	70.4 129.8	70.4 129.8	70.1 131.4		70.7 128.5
REMARKS: MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 18 May 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	25.0	25.0	26.0		27.4
T _{dp}	-9.5	-9.5	-6.1		-12.1
W _d , W _s	210	210	190		210
P	25.99	25.99	25.43		25.88
C	○	○	○		○
M	No	No	No		No
T _{a25}			23.3		
T _{dp25}			-6.0		
I	108.93	108.93	101.65		104.90
I _a	86.39	86.39	84.26		82.69
I _d	56.46	56.46	56.03		55.01
N	95.27	95.27	97.94		95.20
N _a	68.33	68.33	73.73		68.67
N _b	60.28	60.28	68.67		64.95
N _c	49.81	49.81	56.10		53.54
N _d	43.17	43.17	48.50		46.58
i	57.04	61.32	7.63		29.44
i _a	47.88	58.58	6.23		26.72
i _d	31.56	29.13	5.06		20.19
T _{g/w}	32.5	33.5	35.2		49.2
T _s	33.5	36.5	36.2		43.8
ψ	17.2	16.7			0.7
ε					
El, Az	70.4 129.8	70.4 129.8	70.1 131.4		70.7 128.5
REMARKS: MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 18 May 1977

RADIOSONDE: (0900 MDT) TTAA 68151 72HMS 99873 19074 18005 00080
 // // 85486 17064 21014 70100 03863 23518 50575 14162 22040
 40741 26560 22046 30943 41159 24042 25064 495// 24055 20208 571//
 24056 15391 555// 24053 10646 599// 21531 88200 571// 24056 77185
 24571 42120

TTBB 6815/ 72HMS 00873 19074 11863 17664 22691 02863 33624 00564
 44500 14162 55461 18560 66400 26560 77300 41159 88200 571// 99150
 555// 11127 589// 22108 577// 33100 599// 51515 SUPER 70-69

TTCC 68152 72HMS 70868 601// 21515 50081 559// 08512 30409 501//
 14506 20673 481// 18510 10137 383// 88999 77999

TTDD 6815/ 72HMS 11943 577// 22740 639// 33700 601// 44668 611//
 55643 573// 66343 537// 77300 501// 88238 525// 99200 481// 11133
 449// 22100 383//

ROCKETSONDE: (1210 MDT) RRXX 18181 72269 81010 63101 25552 05003
 30539 14005 33534 27002 35528 09008 38516 11007 40511 10015 43508
 12011 45001 13010 47000 09017 48500 11024 50501 13021 52503 10014
 55508 06025 56510 08032 57512 10036 59513 11023 60/// 12020 62///
 12035 63/// 13044 65/// 12034 66/// 12025 67/// 08015 68/// 09041
 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 25 Mar 1977

TIME 1028 (Local) 1628 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	23.0	23.0	22.1		22.9
T _{dp}	-1.2	-1.2	-1.7		-4.0
W _d , W _s	140 3.6	140 3.6	210 3.1		180 5.1
P	26.06	26.06	25.51		25.93
C	E 180 ⊕	E 180 ⊕	E 180 ⊕		E 150 ⊕
M	No	No	No		No
T _{a25}			21.6		
T _{dp25}			-1.3		
I	40.44	40.44	26.97		26.33
I _a	29.80	29.80	20.49		23.96
I _d	16.74	16.74	12.64		16.45
N					
N _a					
N _b					
N _c					
N _d					
i	20.44	22.41	2.25		10.06
i _a	17.12	16.32	1.81		6.83
i _d	10.33	9.51	1.31		5.36
T _{g/w}	23.9	23.0	25.0		27.5
T _s	25.0	27.0	25.0		21.1
ψ	14.9	14.3			2.2
ε					
El, Az	53.9 99.69	53.9 99.69	53.9 100.6		53.9 98.93
REMARKS: MET SAT I, II, IV - No normal data due to cloud cover MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 25 May 1977

TIME 1227 (Local) 1827 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	24.9	24.9	21.2		25.3
T _{dp}	4.2	4.2	9.7		-4.3
W _d , W _s	200 1.8	200 1.8	180 2.6		195 7.26
P	26.04	26.04	25.49		25.92
C	E 180 ⊕	E 180 ⊕	E 140 ⊕		E 150 ⊕
M	No	No	No		No
T _{a25}			22.1		
T _{dp25}			0.6		
I	57.38	57.38	43.03		29.08
I _a	42.44	42.44	33.22		26.27
I _d	25.53	25.53	20.40		18.24
N					
N _a					
N _b					
N _c					
N _d					
i	29.13	32.88	3.55		11.01
i _a	24.45	25.03	2.81		7.34
i _d	15.22	14.16	2.22		5.97
T _{g/w}	30.4	30.1	28.2		30.7
T _s	30.0	33.5	27.0		29.4
ψ	14.9	14.3			2.2
ε					
E1, Az	75.6 145.2	75.6 145.2	75.2 146.9		76.0 143.7
REMARKS: MET SAT I, II, IV - No normal incoming data due to cloud cover MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);

ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 25 May 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	24.8	24.8	22.2		25.0
T _{dp}	-0.5	-0.5	6.6		-4.5
W _d W _s	190 5.4	190 5.4	180 4.0		215 7.7 12.9
P	26.02	26.02	25.48		25.96
C	E 180 (1)	E 180 (2)	E 150 (1)		120 (1) E 150 (1)
M	No	No	No		No
T _{a25}			22.4		
T _{dp25}			0.5		
I	42.02	42.02	32.02		32.57
I _a	30.65	30.65	23.73		29.40
I _d	11.12	11.12	14.27		20.79
N					
N _a					
N _b					
N _c					
N _d					
i	21.42	24.12	7.94		12.43
i _a	18.02	18.03	2.49		8.24
i _d	10.67	10.19	1.42		5.77
T _{g/w}	26.0	27.5	27.0		30.7
T _s	29.9	30.8	27.0		29.8
ψ	14.9	14.3			2.2
ε					
El, Az	77.9 177.9	77.9 177.9	77.3 178.6		78.4 177.4
REMARKS: MET SAT I, II, IV - No normal incoming data due to clouds MET SAT III - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i^a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 25 May 1977

RADIOSONDE: (0900 MDT) TTAA 75151 72HMS 99874 20854 16007 00073
 ///// ///// 85498 19664 18513 70132 05862 21517 50581 10341 23044
 40749 21356 23553 30954 36757 24557 25078 471// 25069 20221 597//
 25556 15398 619// 24534 10651 597// 22523 88181 645// 25563 77253
 25072 41713.

TTBB 7515/ 72HMS 00874 20864 11864 20665 22644 00062 33628 00159
 44635 00323 55599 01904 66400 21356 77264 43756 88181 645// 99142
 597// 11116 627// 22108 575// 33100 597//

TTCC 75152 72HMS 70873 605// 14002 50086 559// 13005 30414 513//
 05514 20682 455// 05508 10149 587// 88999 77999

TTDD 7515/ 72HMS 11803 615// 22659 605// 33619 557// 44300 513//
 55255 469// 66123 431// 77100 387// 88098 389//

ROCKETSONDE: (1300 MDT) RRXX 25190 72269 81010 63101 24553 08008
 25549 07009 30542 07003 35534 06012 40514 08009 43508 09019 45505
 11017 47506 10020 49003 11025 50002 10028 55514 10030 57514 08028
 60517 08046 62526 10036 63529 12040 65533 12040 66537 13041 67///
 14031 68/// 10008 69/// 01029 70/// 01044 72/// 06040 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 27 May 1977

TIME 1413 (Local) 2013 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d , W _s P C M T _{a25} T _{dp25}	28.5 -1.5 210 7.6 25.96 E 90 (⊖) No No	28.5 -1.5 210 7.6 25.96 E 90 (⊖) No No	29.0 1.9 260 4.0 25.41 85 (⊖) No 25.4 -2.5		28.9 -1.1 310 5.1 25.85 E 230 (⊕) No
I I _a I _d N N _a N _b N _c N _d i i _a i _d	114.08 88.75 55.40 79.57 57.22 51.60 42.40 36.27 62.91 52.64 34.78	114.08 88.75 55.40 79.57 57.22 51.60 42.40 36.27 65.76 49.54 30.10	98.17 80.09 53.26 97.00 72.80 67.54 54.78 46.53 7.22 5.63 4.43		88.47 81.42 51.53 17.29 13.45 12.12 9.48 8.16 22.06 18.50 14.63
T _{g/w} T _s ψ ε El, Az	33.0 37.0 14.0 70.4 237.8	33.0 37.0 14.0 70.4 237.8	42.4 48.0 69.9 236.6		46.8 40.3 70.7 238.8
REMARKS: MET SAT III - Not operated this day MET SAT IV: Wind gusts to 11.3 mps					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG485, i_b = RG695
(Units: milliwatts per square centimeter^a [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 27 May 1977

RADIOSONDE: (0800 MDT) TTAA 77141 72HMS 99872 19268 18002 00071
 ///// ///// 85468 19264 23003 70098 05460 26041 40748 21369 27546
 30956 38558 29052 25078 489// 28543 20222 569// 28050 15402 617//
 27536 10651 653// 28013 82157 617// 29028 77307 28555 41311

TTBB 7714/ 72HMS 00872 19268 11862 20066 22841 19064 33682 03859
 44624 01865 55583 02162 66543 03164 77400 21369 88280 42357 99225
 543// 11157 617// 22100 653//

TTCC 77142 72HMS 70867 627// 05005 50077 587// 09510 30400 547//
 09020 20663 489// 09006 88999 77999

TTDD 7714/ 72HMS 11901 681// 22768 651// 33723 671// 44700 627//
 55663 633// 66618 579// 77348 579// 88193 475//

ROCKETSONDE: (1430 MDT) RRXX 27203 72269 81010 13101 25552 08007
 30542 11001 35531 17005 40510 10019 41512 11020 42509 11017 45003
 12027 49000 11020 50501 12025 53508 11039 55507 09037 56506 09038
 58513 11043 60521 12035 62529 10048 63530 10054 64/// 12047 65///
 15028 66/// 18012 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 1 June 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	30.8	30.8	30.6	missing	31.5
T _{dp}	6.7	6.7	7.1	missing	8.7
W _d , W _s	140 2.0	140 2.0	190 0.9	320 2.0	120 2.0
P	26.14	26.14	25.65	25.67	26.04
C	85 ⊕	85 ⊕	70 ⊕	70 ⊕	E 50 ⊕
M	Yes	Yes	Yes	Yes	Yes
T _{a25}					
T _{dp25}					
I	104.73	104.73	97.98	101.26	84.11
I _a	79.53	79.53	78.47	76.72	75.26
I _d	50.32	50.32	51.44	48.80	49.24
N	91.83	91.83	92.50	92.32	90.16
N _a	66.92	66.92	69.98	67.07	64.95
N _b	61.94	61.94	64.73	61.82	59.06
N _c	50.96	50.96	52.35	51.31	49.10
N _d	42.15	42.15	44.47	42.63	43.22
i	51.04	50.00	6.15	3.39	20.60
i _a	42.34	44.68	4.62	2.59	19.59
i _d	27.56	27.38	3.54	0.64	15.84
T _{g/w}	30.2	35.5	45.7	23.0	40.6
T _s	45.4	46.2	55.8	27.2	56.2
ψ	19.5	20.1			4.2
ε					
El, Az	79.0 176.7	79.0 176.7	78.4 177.5	78.6 172.6	79.6 176.0
REMARKS: MET SAT I, II: Air temperature and Dew point temperature at 25 meter height. (T _{a25} , T _{dp25}) discontinued until further notice.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 7218

DATE OF OBSERVATION 1 June 1977 TIME 1424 (Local) 2024 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	31.0	31.0	34.4	36.5	32.8
T _{dp}	5.5	5.5	6.0	14.0	7.8
W _d , W _s	160 2.0	160 2.0	160 1.3	320 2.0	010 5.1
P	26.13	26.13	25.60	25.63	26.00
C	90 (1)	90 (1)	85 (1)	100 (1)	E 50 (1)
M	Yes	Yes	Yes	Yes	Yes
T _{a25}					
T _{dp25}					
I	98.34	98.34	94.22	95.95	81.39
I _a	75.24	75.24	75.58	73.13	74.56
I _d	47.14	47.14	50.19	47.19	47.45
N	90.17	90.17	92.87	93.94	89.56
N _a	65.64	65.64	69.98	68.48	64.35
N _b	60.79	60.79	65.10	62.83	58.82
N _c	49.81	49.81	52.72	51.72	48.74
N _d	41.25	41.25	44.65	42.83	42.98
i	48.84	55.86	5.80	3.49	20.08
i _a	40.54	41.95	4.32	2.59	19.47
i _d	26.22	25.34	3.44	0.80	15.84
T _{g/w}	41.7	43.5	48.8	23.0	49.9
T _s	46.4	48.8	54.6	25.1	58.1
ψ	19.5	20.1			4.2
ε					
El, Az	68.9 243.8	68.9 243.8	68.6 242.6	69.5 241.6	69.3 244.9
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 1 June 1977

RADIOSONDE: (0800 MDT) TTAA 51141 72HMS 99880 21265 00000 00034
 ///// ///// 85501 20261 17503 70150 10059 09011 50585 11558 06527
 40753 20758 06019 30958 36957 24508 25082 451// 27513 20228 533//
 29035 15411 617// 30051 10656 689// 33039 88120 685// 30021 77170
 30054 41619

TTBB 5114/ 72HMS 00880 21265 11869 21261 22731 12860 33500 11558
 44471 15150 55441 17359 66400 20758 77265 43556 88207 527// 99159
 589// 11127 675// 22120 685// 33116 675// 44100 689//

TTCC 51141 72HMS 70870 653// 01010 50079 581// 07019 30405 511//
 25513 20668 475// 29015 10138 363// ///// 88999 77999

TTDD 5114/ 72HMS 11843 709// 22801 671// 33700 653// 44613 597//
 55353 549// 66300 511// 77223 539// 88200 475// 99000 363//

ROCKETSONDE: (1210 MDT) RRXX 01181 72269 81010 63101 25552 12004
 29547 10008 30541 09011 35530 10011 37523 08020 40518 10017 42509
 09024 45508 10028 50505 10031 52503 12029 55511 11032 60524 09036
 61522 11044 62523 12044 63527 10035 65/// 08047 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 2 June 1977

TIME 1022 (Local) 1622 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	24.9	24.9	28.8		29.8
T _{dp}	8.1	8.1	6.8		7.5
W _d , W _s	250 3.0	250 3.0	220 3.1		200 2.0
P	26.13	26.13	25.60		26.00
C	E100-⊙	E100-⊙	150 ⊙		150 ⊙
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	90.34	90.34	78.81		66.70
I _a	68.92	68.92	60.30		60.51
I _d	44.17	44.17	39.56		38.85
N	81.74	81.74	83.11		84.63
N _a	59.90	59.90	64.35		61.58
N _b	55.68	55.68	59.47		56.90
N _c	45.34	45.34	47.84		47.54
N _d	36.91	36.91	39.96		41.78
i	46.14	51.76	5.92		17.59
i _a	39.00	38.91	4.42		17.05
i _d	25.11	23.98	3.44		14.03
T _{g/w}	33.0	31.5	36.7		missing
T _s	35.1	32.0	37.4		45.6
ψ	19.9	19.8			3.3
ε					
El, Az	52.9 96.5	52.9 96.5	53.0 97.4		52.9 95.8
REMARKS: MET SAT III: Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%), ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 2 June 1977

TIME 1207 (Local) 1807 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	31.1	31.1	31.7		34.7
T _{dp}	8.7	8.7	6.9		6.8
W _d , W _s	190 3.0	190 3.0	190 2.2		205 0.9
P	26.10	26.10	25.56		25.95
C	100 (1)	100 (1)	E 250 (1)		60 (1)
M	Mo	Mo	Mo		Mo
T _{a25}					
T _{dp25}					
I	104.41	104.41	105.75		83.68
I _a	84.99	84.99	62.14		75.96
I _d	50.00	50.00	33.51		48.68
N	89.40	89.40	53.85		30.68
N _a	64.24	64.24	37.15		64.50
N _b	59.64	59.64	36.21		59.30
N _c	49.04	49.04	28.33		48.98
N _d	40.10	40.10	24.02		43.46
i	50.92	50.39	5.44		20.92
i _a	42.21	44.88	4.32		20.30
i _d	27.67	26.80	3.44		16.60
T _{g/w}	40.2	38.0			missing
T _s	47.2	46.4			54.7
ψ	19.9	19.8			3.3
ε					
El, Az	73.6 127.6	73.6 127.6	73.3 129.6		73.8 126.0
REMARKS: MET SAT III: Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 2 June 1977

TIME 1224 (Local) 1824 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d , W _s P C M T _{a25} T _{dp25}	31.9 6.4 170 0.2 26.00 85 (1) No	31.9 6.4 170 0.2 26.00 85 (1) No	32.0 6.4 190 3.1 25.56 E 250 (1) No		34.7 5.9 207 2.0 25.93 E 85 (1) No
I I _a I _d N N _a N _b N _c N _d i i _a i _d	106.30 81.24 51.38 89.91 64.50 59.90 49.17 40.87 52.63 43.89 28.89	106.30 81.24 51.38 89.91 64.50 59.90 49.17 40.87 59.50 44.48 27.18	111.19 89.58 59.48 89.31 68.48 63.98 51.78 43.90 8.28 6.03 -4.94		88.68 81.42 51.80 91.84 65.55 60.14 49.94 44.06 22.58 21.64 18.02
T _{g/w} T _s ψ ε	39.5 47.1 19.9	47.1 46.6 19.8	45.5 42.5		missing 57.0 3.3
El, Az	76.2 139.0	76.2 139.0	75.8 141.0		76.5 137.2
REMARKS: MET SAT: Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 2 June 1977

RADIOSONDE: (0800 MDT) TTAA 52141 72HMS 99877 26668 24004 00094
 ///// ///// 85532 25061 19506 70202 11459 17002 50590 10160 12510
 40758 20759 17510 30964 37957 25008 25087 469// 27015 20233 515//
 28525 15417 603// 28034 10663 703// 27512 88104 709// 28013 77122
 28035 40510

TTBS 5214/ 72HMS 00877 26668 11850 25061 22786 19260 33578 02571
 44500 10160 55400 20759 66327 32158 77300 37957 88272 43957 99261
 465// 11250 469// 22208 519// 33185 513// 44154 601// 55104 709//
 66100 703//

TTCC 52142 72HMS 70878 655// 09008 50087 559// 12010 30416 511//
 105// 20681 461// 09518 88999 77999

TTDD 5214/ 72HMS 11700 655// 22500 559// 33300 511// 44283 529//
 55118 397// 51515 10190 10153

ROCKETSONDE: NONE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 8 June 1977

TIME 0953 (Local) 1553 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	24.2	24.2	25.8	25.6	27.0
T _{dp}	9.5	9.5	9.1	13.4	8.9
W _d , W _s	020 1.0	020 1.0	180 2.7	160 2.2	150 4.1
P	26.07	26.07	25.50	25.57	25.91
C	65 ⊕	65 ⊕	⊙	300 - ⊕	130 ⊕ 250 - ⊕
M	Yes	Yes	Yes	Yes	Yes
T _{a25}					
T _{dp25}					
I	75.42	75.42	71.10	68.02	69.10
I _a	54.77	54.77	53.24	49.25	54.36
I _d	35.06	35.06	35.54	31.76	34.12
N	75.22	75.22	79.36	82.22	75.27
N _a	55.30	55.30	62.10	61.41	55.94
N _b	52.11	52.11	58.16	56.97	51.50
N _c	43.81	43.81	48.78	47.88	43.10
N _d	36.40	36.40	41.65	40.20	36.85
i	30.48	36.63	4.62	2.33	14.98
i _a	25.48	28.06	3.62	1.76	14.49
i _d	16.33	17.09	2.53	.50	11.49
T _{g/w}	27.9	30.2	34.0	21.5	40.7
T _s	31.6	32.3	37.0		39.0
ψ	19.3	18.2			3.2
ε					
El, Az	46.0 90.98	46.0 90.98	47.1 91.71	46.2 90.85	46.9 90.37
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 8 June 1977

TIME 1220 (Local) 1820 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	30.2	30.2	31.1	29.8	
T _{dp}	8.4	8.4	8.6	10.8	
W _d	140	140	200	230	
P _s	26.01	26.01	25.48	25.53	
C	65 (1)	55 (1)	45 (1)	35 (1)	
T _{a25}	Yes	Yes	Yes	Yes	
T _{dp25}					
I	99.89	99.89	96.51	102.65	
I _a	77.06	77.06	76.85	76.72	
I _d	48.31	48.31	51.05	49.50	
N	79.95	79.95	88.74		
N _a	58.24	58.24	67.35		
N _b	53.77	53.77	63.04		
N _c	45.21	45.21	52.34		
N _d	37.68	37.68	44.28		
i	45.17	37.68	6.63	3.39	
i _a	37.71	39.92	5.13	2.17	
i _d	24.11	24.56	3.94	0.60	
T _{g/w}	45.4	42.9	42.9	22.6	
T _s	44.8	47.2	46.3		
ψ	19.3	18.2			
ε					
El, Az	76.0 133.4	76.0 133.4	75.7 135.5	75.2 132.0	
REMARKS: MET SAT III - No normal incoming data due to clouds MET SAT IV - Not operated this observation					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 8 June 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	30.2	30.2	31.5	29.7	31.1
T _{dp}	7.4	7.4	7.8	16.1	9.2
W _d , W _s	140 0.3	140 0.3	140 0.9	230 0.2	185 0.8
P	25.99	25.99	25.43	25.52	25.83
C	E 250 ⊕	E 250 ⊕	100 ⊕	65 ⊕	E 80 ⊕ 150 ⊕ 250 ⊕
M	Yes	Yes	Yes	Yes	Yes
T _{a25}					
T _{dp25}					
I	106.09	108.09	102.11	114.25	93.80
I _a	82.72	82.72	82.18	85.22	51.10
I _d	51.69	51.69	53.45	52.40	23.16
N	85.19	85.19	90.43		
N _a	62.32	62.32	68.11		
N _b	57.09	57.09	64.17		
N _c	48.15	48.15	53.10		
N _d	48.61	48.61	44.47		
i	49.08	56.09	7.22	3.49	23.31
i _a	41.06	42.86	5.53	2.50	10.75
i _d	26.44	26.31	4.35	.60	8.10
T _{g/w}	41.5	42.1	45.5	22.6	53.5
T _s	46.9	49.0	47.0		52.2
ψ	19.3	18.2			3.2
ε					
E1, Az	79.9 174.8	79.9 174.8	79.3 175.8	79.4 170.5	80.4 174.1
REMARKS: MET SAT III, IV : No normal incoming due to clouds between sun & sensors.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (dir), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG530, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 8 June 1977

TIME 1355 (Local) 1955 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	37.6	30.6	32.9		31.0
T _{dp}	7.3	7.3	10.7		7.3
W _d , W _s	150 1.3	150 1.3	220 1.3		180 8.8
P	25.97	25.97	25.45		25.81
C	85 ⊕	85 ⊕	○		E 80 ⊕ 150 ⊕ 250 ⊕
M	Yes	Yes	Yes		Yes
T _{a25}					
T _{dp25}					
I	52.94	52.94	99.45		97.06
I _a	38.48	38.48	80.44		78.16
I _d	21.93	21.93	52.78		52.17
N			89.49		
N _a			67.35		
N _b			63.63		
N _c			52.91		
N _d			44.28		
i	24.11	28.21	6.75		30.18
i _a	19.82	21.38	5.23		27.66
i _d	12.00	18.94	4.04		24.18
T _{g/w}	35.0	37.5	47.7		51.0
T _s	38.2	39.2	50.0		53.4
ψ	19.3	18.2			3.2
ε					
El, Az	74.9 231.3	74.9 231.3	74.4 229.9		75.3 232.6
REMARKS: MET SAT I, IV - No normal incoming data due to clouds MET SAT III - Not operated this observation					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 8 June 1977

RADIOSONDE: (0800 MDT) TTAA 58151 72HMS 99874 22664 24002 00072 /////
 // 35506 20462 20004 70155 09460 16507 50585 09358 16014 40754 19363
 16017 30961 15520 25035 461// 16516 20230 581// 15518 15409 601// 16010
 10658 665// 26006 88184 609// 14018 77272 15521 40507 Ø

TTBB 5815/ 72HMS 00874 22664 11700 09460 22636 03661 33535 07550 44524
 07157 55500 09358 66472 00568 77400 19363 88277 40160 99184 619// 11176
 619// 22168 591// 33129 613// 44106 681// 55100 665// Ø

TTCC 58157 72HMS 70874 631// 09013 50085 559// 88999 77999 Ø

TTDD 5815/ 72HMS 11763 663// 22500 559// Ø

ROCKETSONDE: (1210 MDT) RRXX 08181 72269 81010 63101 25549 14007 27549
 11008 30539 11011 31538 12017 35529 11012 37523 11020 40525 08021 42515
 09033 45504 10034 47504 10046 50001 10047 52503 11039 55510 11045 57516
 09042 60515 09044 61520 09028 62525 10019 64536 10040 65542 10042 66548
 09050 67*** 09063 68*** 09062

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Landsat B

DATE OF OBSERVATION 9 June 1977

TIME 1039 (Local) 1639 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	27.3	27.3	28.2		29.7
T_{dp}	9.8	9.8	9.8		11.9
W_d, W_s	150 3.0	150 3.0	230 4.5		CALM
P	26.05	26.05	25.51		25.91
C	250 - \odot	250 - \odot	E 250 \odot		140 \odot 250 \odot
M	No	No	No		No
T_{a25}					
T_{dp25}					
I	70.17	70.17	79.27		79.98
I_a	54.66	54.66	66.20		63.30
I_d	36.23	36.23	41.57		40.08
N	76.24	76.24	52.16		82.95
N_a	56.70	56.70	42.40		61.34
N_b	49.30	49.30	36.02		57.74
N_c	44.70	44.70	30.02		47.30
N_d	37.68	37.68	27.77		41.30
i	46.63	50.06	5.68		18.52
i_a	39.64	39.11	4.52		17.57
i_d	25.22	24.85	3.54		14.13
$T_{g/w}$	30.0	29.5	36.1		46.5
T_s	missing	missing	37.0		48.7
ψ	15.7	15.4			0.9
ϵ					
El, Az	56.6 98.0	56.6 98.0	56.6 99.0		56.6 97.2
REMARKS: METSAT III - Operations at this site discontinued until May 1978.					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 9 June 1977 TIME 1236 (Local) 1836 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	31.1	31.1	30.4		31.7
T _{dp}	8.8	8.8	8.9		5.9
W _d , W _s	100 3.0	160 3.0	220 2.2		260 1.5
P	26.04	26.04	25.48		25.88
C	65 ①	65 ①	70 ①		90 ①
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	103.99	103.99	97.98		105.66
I _a	78.46	78.46	78.01		82.35
I _d	49.58	49.58	51.05		53.40
N	84.93	84.93	91.18		85.47
N _a	61.94	61.94	69.04		63.27
N _b	57.09	57.09	64.35		59.42
N _c	47.64	47.64	53.28		48.14
N _d	40.10	40.10	45.03		42.62
i	47.74	57.11	6.39		23.20
i _a	39.64	43.06	4.92		22.22
i _d	25.22	26.60	3.84		18.50
T _{g/w}	35.0	38.5	44.9		60.2
T _s	missing	missing	48.0		59.2
ψ	15.7	15.4			0.9
ε					
E1, Az	77.3 150.8	77.3 150.8	76.8 152.6		77.7 149.3
REMARKS: METSAT III - Operations at this site discontinued until May 1978.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = CG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 9 June 1977

RADIOSONDE: (1200 MDT) TTAA 59183 72HMS 99874 28268 00000 00054
///// ///// 85502 26889 27505 70173 12062 29004 50589 07950 23510
40759 18569 20516 30967 339// 18517 88999 77421 23022 41207

TTBB 5918/ 72HMS 00874 28268 11548 03757 22522 05762 33493 08943
44444 13174 55400 18569 66318 30769 77294 351// 51515 10150

ROCKETSONDE: (1230 MDT) RRXX 09183 72269 81010 13101 24*** 11007
25550 10008 30542 11011 31537 11012 35532 07012 40519 09021 41515
08031 42515 08041 45505 10038 47504 12036 48503 11034 50501 08042
51501 09052 55507 11051 56509 11055 57512 11047 58515 11034 60522
11048 62529 11040 64538 11054 65542 11051 66548 09051 67552 08065
68556 08069 69*** 08070 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 14 June 1977 TIME 1217 (Local) 1817 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	34.2	34.2	35.1		36.8
T _{dp}	7.2	7.2	7.9		6.1
W _d , W _s	180 2.6	180 2.6	200 3.6		200 2.6
P	26.13	26.13	25.61		25.98
C	70 - ①	70 - ①	250 - ①		65 ①
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	101.58	101.58	97.25		105.66
I _a	76.79	76.79	77.55		82.35
I _d	49.05	49.05	51.05		53.02
N	88.51	88.51	93.62		94.03
N _a	63.86	63.86	70.54		70.16
N _b	58.75	58.75	65.29		63.87
N _c	48.66	48.66	53.85		52.77
N _d	40.87	40.87	45.40		43.98
i	48.84	57.58	7.34		23.93
i _a	41.12	43.36	5.73		19.25
i _d	26.33	26.70	4.35		16.38
T _{g/w}	40.5	41.5	44.6		54.4
T _s	missing	missing	47.3		57.2
ψ	19.1	18.0			2.4
ε					
El, Az	75.7 129.3	75.7 129.3	75.4 131.4		75.9 127.4
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 14 June 1977

TIME 1242 (Local) 1842 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a	35.0	35.0	34.4		37.1
T_{dp}	6.0	6.0	7.5		6.1
W_d, W_s	180 3.0	180 3.0	180 3.1		180 5.1
P	26.13	26.13	25.61		25.98
C	70 ①	70 ①	70 ①		65 ①
T_{a25}	No	No	No		No
T_{dp25}					
I	104.10	104.10	98.99		25.35
I_a	79.85	79.85	79.28		18.23
I_d	50.32	50.32	51.44		11.34
N	89.72	89.72	94.75		
N_a	64.11	64.11	71.67		
N_b	59.00	59.00	66.04		
N_c	48.53	48.53	54.60		
N_d	41.25	41.25	45.59		
i	49.45	58.36	7.34		5.93
i_a	41.63	44.07	5.83		4.68
i_d	26.56	26.99	4.45		3.54
$T_{g/w}$	44.8	46.7	46.1		48.0
T_s	missing	missing	48.0		46.5
ψ	19.1	18.0			2.4
ϵ					
El, Az	79.1 150.7	79.1 150.7	78.6 152.7		79.5 148.9
REMARKS: MET SAT IV - No normal incoming data due to clouds					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 14 June 1977 TIME 1344 (Local) 1944 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	36.2	36.2	36.7		36.9
T _{dp}	5.8	5.8	5.4		4.2
W _d , W _s	110 0.1	110 0.1	220 5.4		210 6.2
P	26.10	26.10	25.58		25.94
C	70 ⊕	70 ⊕	E 70 ⊕		65 ⊕ 200 ⊕
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	105.57	105.57	98.99		98.48
I _a	78.26	78.26	79.82		76.54
I _d	49.16	49.16	51.63		50.57
N	89.40	89.40	94.37		92.36
N _a	64.24	64.24	71.29		67.85
N _b	59.00	59.00	65.84		60.94
N _c	48.91	48.91	53.28		50.89
N _d	41.00	41.00	44.84		42.51
i	49.82	58.13	6.98		22.48
i _a	41.76	44.17	6.51		17.93
i _d	26.67	26.80	4.85		15.50
T _{g/w}	46.9	48.0	49.0		60.5
T _s	missing	missing	54.0		58.0
ψ	19.1	18.0			2.4
ε					
El, Az	77.1 224.0	77.1 224.0	76.6 222.6		77.5 225.3
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 14 June 1977

RADIOSONDE: (0800 MDT) TTAA 64141 72HMS 99876 27078 35005 00065
 ///// ///// 85527 24470 15010 70193 14467 19011 50591 08769 20007
 40760 21771 20009 30967 357// 25017 25091 455// 25525 20236 551//
 26530 15417 619// 27541 10693 719// 20011 88999 77152 28042 40822

TTBB 6414/ 72HMS 00876 27078 11866 24872 22850 24470 33835 25270
 44724 14866 55678 12474 66648 09471 77577 00159 88534 05559 99518
 07559 11500 08769 22486 09976 33400 21771 44391 22571 55383 21374
 66322 31568 77217 523// 88171 593// 99138 639// 11128 645// 22124
 653// 33112 663// 44100 719//

TTCC 64141 72HMS 70876 653// 09516 50084 585// 10019 30410 525//
 09018 20686 459// 09023 10150 411// 08527 88943 735// 160// 77999

TTDD 6414/ 72HMS 11943 735// 22913 709// 33823 669// 44763 659//
 55738 705// 66700 653// 77200 459// 88113 435// 99100 411// 11093
 377// 51515 SUPER 76-74

ROCKETSONDE: (0700 MDT) RRXX 14132 72269 81010 13101 25553 07010
 30544 09015 35529 08019 37524 10027 40513 08022 42513 08 30 45501
 07036 46505 08044 50502 09049 52503 09034 53504 10035 55510 10037
 56514 11045 58516 10041 60/// 09056 63/// 09053

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 15 June 1977 TIME 0947 (Local) 1547 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a	26.5	26.5	29.8		28.8
T_{dp}	9.3	9.3	2.9		8.5
W_d, W_s	260 2.0	260 2.0	210 3.6		060 1.5
P	26.16	26.16	25.65		26.04
C	○	○	○		○
M	No	No	No		No
T_{a25}					
T_{dp25}					
I	71.22	71.22	69.27		67.25
I_a	54.23	54.23	51.74		52.85
I_d	35.17	35.17	34.96		33.65
N	83.65	83.65	87.24		86.30
N_a	61.69	61.69	67.17		64.67
N_b	58.11	58.11	62.48		59.22
N_c	47.25	47.25	51.22		49.51
N_d	39.60	39.60	43.53		42.04
i	36.35	40.16	4.97		19.11
i_a	missing	30.19	3.82		15.24
i_d	19.22	18.64	2.83		12.82
$T_{g/w}$	31.3	32.5	36.0		42.9
T_s	missing	missing	40.4		38.0
ψ	18.6	18.6			3.6
ϵ					
El, Az	45.6 89.3	45.6 89.3	45.7 90.0		45.5 88.7
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 15 June 1977

TIME 0953 (Local) 1553 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a	26.5	26.5	29.8		29.4
T_{dp}	9.3	9.3	8.0		8.7
W_d, W_s	260 2.0	260 2.0	220 2.2		CALM
P	26.16	26.16	25.65		26.04
C	○	○	○		○
T_{a25}	No	No	No		No
T_{dp25}					
I	73.50	73.50	72.02		70.08
I_a	56.81	56.81	53.94		55.05
I_d	36.12	36.12	36.59		34.97
N	83.40	83.40	87.43		87.91
N_a	61.05	61.05	67.17		66.09
N_b	58.37	58.37	62.85		60.63
N_c	47.13	47.13	51.41		50.73
N_d	39.85	39.85	43.71		43.25
i	37.94	41.52	4.97		17.07
i_a	missing	31.31	3.82		15.72
i_d	20.00	19.22	2.83		13.18
$T_{g/w}$	31.3	32.5	32.0		42.9
T_s	missing	missing	40.4		38.0
ψ	18.6	18.6			3.6
ϵ					
E_l, A_z	46.9 90.1	46.9 90.1	46.9 90.8		46.8 89.5
REMARKS:					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 15 June 1977

TIME 1035 (Local) 1635 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	28.4	28.4	31.1		30.1
T _{dp}	8.5	8.5	9.6		8.5
W _d , W _s	350 0.1	350 0.1	210 3.6		040 1.0
P	26.16	26.16	25.63		26.03
C	○	○	○		○
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	82.98	82.98	82.02		80.63
I _a	63.77	63.77	62.73		62.72
I _d	63.77	63.77	41.48		40.26
N	84.67	84.67	92.12		90.54
N _a	60.92	60.92	69.79		66.69
N _b	59.51	59.51	63.60		61.03
N _c	47.89	47.89	53.85		50.53
N _d	39.85	39.85	45.40		42.64
i	41.86	46.30	6.04		22.01
i _a	missing	35.06	4.62		17.29
i _d	21.44	21.65	3.54		14.51
T _{g/w}	35.0	38.5	39.5		52.7
T _s	missing	missing	46.3		49.0
ψ	18.6	18.6			3.6
ε					
El, Az	55.7 96.4	55.7 96.4	55.7 97.4		55.7 95.6
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 15 June 1977

TIME 1300 (Local) 1900 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d W _s P C T _{a25} T _{dp25}	33.7 7.1 150 0.3 26.13 ○ No	33.7 7.1 150 0.3 26.13 ○ No	35.0 7.8 180 1.8 25.59 ○ No		34.2 7.2 220 1.0 25.98 65 ○ No
I I _a I _d N N _a N _b N _c N _d i i _a i _d	104.10 78.46 49.58 92.85 68.20 62.71 51.21 43.17 53.00 missing 28.33	104.10 78.46 49.58 92.85 68.20 62.71 51.21 43.17 59.61 45.00 27.67	101.01 80.90 53.16 97.75 78.80 68.86 55.16 46.34 6.98 5.33 3.94		98.48 76.07 50.09 93.77 68.31 61.64 50.73 42.24 22.06 20.19 17.41
T _{g/w} T _s ψ ε	43.2 missing 18.6	46.8 missing 18.6	48.6 55.5		57.7 62.1 3.6
El, Az	80.3 172.7	80.3 172.7	79.7 173.8		80.8 171.7
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 15 June 1977

RADIOSONDE: None This Date

ROCKETSONDE: (1025 MDT) RRXX 15163 72269 81010 63101 25*** 07009
26548 09010 28549 10014 30545 09020 33532 10018 35530 10019 39518
08022 40518 08029 42507 10034 45502 10036 47507 09037 50505 09040
52510 10047 55509 10054 56512 10055 58513 10041 59517 09036 60521
09038 62530 08056 65543 10064 66546 10067 67546 10075 68546 10062
69549 09041 70556 07038 72*** 07050

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 21 June 1 77

TIME 1156 (Local) 1756 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	30.3	30.3	29.3		
T _{dp}	8.0	8.0	10.1		
W _d , W _s	310 2.2	310 2.2	170 5.4		
P	26.07	26.07	25.55		
C	180 ①	180 ①	250 ①		
T _{a25}	Yes	Yes	Yes		
T _{dp25}					
I	92.96	92.96	94.04		
I _a	69.88	69.88	74.77		
I _d	41.31	41.31	49.62		
N	83.01	83.01	85.55		
N _a	61.94	61.94	70.36		
N _b	56.96	56.96	57.97		
N _c	46.87	46.87	51.22		
N _d	39.85	39.85	42.96		
i	50.55	57.22	7.10		
i _a	missing	43.36	5.43		
i _d	26.78	26.70	4.35		
T _{g/w}	37.5	40.5	39.6		
T _s	missing	missing	41.0		
ψ	23.3	24.3			
ε					
El, Az	71.8 116.8	71.8 116.8	71.7 118.6		
REMARKS: MET SAT IV - Not operated this date					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
 Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
 Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
 Units: milliwatts per square centimeter [mW cm⁻²]

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 21 June 1977

RADIOSONDE: (0800 MDT) TTAA 71141 72HMS 99874 24666 31506 00056
 ///// ///// 85502 23867 22017 70150 10459 21011 50584 10544 22008
 40752 21556 23026 30976 36558 21549 25082 441// 22071 20228 537//
 22074 15409 631// 22556 10656 637// 18011 88115 673// 22535 77209
 22078 40710

TTBB 7114/ 72HMS 00874 24666 11850 23867 22818 22065 33756 14860
 44607 01457 55591 00259 66525 08144 77508 09756 88486 12120 99471
 13147 11469 12559 22427 18559 33400 21556 44334 30142 55305 35558
 66287 38959 77272 395// 88212 521// 99150 631// 11115 673// 22110
 631// 33100 637//

TTCC 71141 72HMS 70873 615// 14011 50084 561// 11015 30411 541//
 08021 20529 477// 10029 10142 399// 07530 07369 345// 11536 88999
 77999

TTDD 7114/ 72HMS 11873 683// 22700 615// 33453 545// 44300 539//
 55203 493// 66200 477// 77195 445// 88153 435// 99103 403// 11100
 399// 22078 351// 33070 345// 44065 349//

ROCKETSONDE: (1055 MDT) PRXX 21166 72269 81010 13101 25/// 09013
 30/// 10013 35/// 10013 37/// 11018 40/// 08031 42/// 08042 43///
 08049 45/// 11044 46/// 11036 48/// 10035 50/// 10044 55/// 10045
 56/// 10039 58/// 08040 60/// 11045 63/// 09057 64/// 08064 65///
 08074 67/// 08080 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 22 June 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	27.4	27.4	24.6		29.3
T _{dp}	7.7	7.7	8.7		9.7
W _d , W _s	020 3.1	020 3.1	010 1.8		CALM
P	26.09	26.09	25.59		25.95
C	70 (1)	70 (1)	E 70 (1)		E 55 (1)
M	Yes	Yes	Yes		Yes
T _{a25}					
T _{dp25}					
I	104.83	104.83	27.43		109.58
I _a	78.99	78.99	19.91		83.16
I _d	49.15	49.15	12.36		54.35
N	88.76	88.76			89.33
N _a	64.62	64.62			64.47
N _b	59.64	59.64			58.61
N _c	48.66	48.66			48.10
N _d	41.00	41.00			40.82
i	46.19	59.16	1.78		22.89
i _a	missing	44.98	1.41		21.04
i _d	26.33	27.09	1.01		15.24
T _{g/w}	38.5	42.1	29.5		40.4
T _s	missing	missing	29.2		41.0
ψ	23.6	24.0			4.6
ε					
El, Az	80.5 170.5	80.5 170.5	79.9 171.7		80.0 169.4
REMARKS: MET SAT II - No normal incoming data due to clouds					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 22 June 1977 TIME 1436 (Local) 2036 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d W _s P C M T _{a25} T _{dp25}	29.9 7.4 010 2.5 26.07 80 (1) Yes	29.9 7.4 010 2.5 26.07 80 (1) Yes			31.2 9.0 315 3.8 25.92 E 55 (1) 200 (1) Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d	102.00 88.32 54.77 50.97 missing 29.56	102.00 88.32 54.77 22.87 16.41 12.23			31.12 22.65 13.71 6.04 5.32 3.51
T _{g/w} T _s ψ _s ε El, Az	39.9 missing 23.6 68.3 250.0	34.3 missing 24.0 68.3 250.0			34.8 39.4 4.6 68.5 251.1
REMARKS: MET SAT I-A, I-B; Normal incoming data missing due to clouds MET SAT II - Not operated this observation					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%), ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 22 June 1977

RADIOSONDE: (0900 MDT) TTAA 72151 72JAL 99877 21060 36002 00072
 ///// '/// 85503 19061 01561 01504 70142 07056 27510 50582 09950
 15566 .0751 21564 20537 30966 371// 19566 25090 465// 19584 20235
 565// 20068 15414 625// 21049 10663 641// 19058 88159 633// 21051
 77225 19595 41227

TTBB 7215/ 72JAL 00877 21060 11850 19061 22801 17062 33700 07056
 44637 00611 55590 01723 77480 11959 88441 15368 99428 17162 11400
 21564 22338 32158 33319 33966 44200 56511 55159 609// 66136 653//
 77115 653// 88100 641//

TTCC 72153 72JAL 70881 607// 22036 50092 553// 18016 30418 531//
 17056 88999 77999

TTDD 7215/ 72JAL 11738 647// 22700 607// 33596 609// 44500 553//
 55383 569// 66208 469// 51515 10190 20683

ROCKETSONDE: (1215 MDT) RRXX 22182 72269 81010 63101 26550 10011
 30543 09018 32535 11021 35532 10012 36534 09014 38524 08030 39517
 08032 40517 09033 42509 09034 43505 09034 45508 11040 50505 09045
 55510 10047 60523 11066 62531 10066 65546 11078 66551 10069 67***
 08054 68*** 06055 70*** 07087 72*** 09067

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 23 June 1977 TIME 1035 (Local) 1635 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	25.3	25.3	26.5		26.0
T _{dp}	8.4	8.4	8.2		7.2
W _d , W _s	CALM	CALM	CALM		065 1.0
P	26.15	26.15	25.64		26.02
C	150 ①	150 ①	85 ①		65 ① E 90 ①
T _{a25}	Yes	Yes	Yes		Yes
T _{dp25}					
I	83.61	83.61	83.21		63.33
I _a	62.59	62.59	63.43		49.71
I _d	41.21	41.21	42.15		31.57
N	88.12	88.12	84.99		26.27
N _a	64.88	64.88	71.29		19.20
N _b	59.26	59.26	57.79		18.39
N _c	48.66	48.66	51.22		14.96
N _d	40.10	40.10	42.78		13.54
i	40.15	45.87	4.97		15.30
i _a	missing	34.65	3.92		14.03
i _d	21.22	21.46	3.13		10.16
T _{g/w}	38.0	37.5	36.2		27.9
T _s	missing	missing	30.0		31.2
ψ	15.4	16.7			4.4
ε					
Ei, Az	55.4 95.8	55.4 95.8	55.4 96.8		55.4 95.0
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 23 June 1977

TIME 1150 (Local) 1750 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d W _s C M T _{a25} T _{dp25}	28.9 7.1 350 0.4 26.14 140 ① 250 ① No	28.9 7.1 350 0.4 26.14 140 ① 250 ① No	29.3 6.6 160 4.5 25.62 E 85 ① No		27.5 6.5 200 2.0 26.02 65 ① E 100 ① Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d	50.00 36.12 21.19 19.95 missing 9.00	50.00 36.12 21.19 23.21 17.33 9.81	103.21 82.41 53.64 86.87 70.36 60.98 51.97 44.09 7.10 5.43 4.15		105.66 83.04 53.21 76.60 57.40 52.75 43.45 37.59 25.81 23.82 17.41
T _{g/w} T _s ε	30.5 missing 15.4	38.5 missing 16.7	42.4 41.0		36.9 42.3 4.4
E _l , A _z	70.6 114.2	70.6 114.2	70.5 115.9		70.8 112.7
REMARKS: MET SAT I - No normal incoming data due to clouds					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%);
ε = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 23 June 1977

RADIOSONDE: (1000 MDT) TTAA 73161 72HMS 99877 23666 16006 11102
 ///// ///// 85536 20667 14505 70156 07660 23009 50583 10749 18508
 40750 23373 18017 30955 375// 20535 25079 447// 20549 20225 537//
 21549 15406 607// 22535 10656 641// 19013 88152 615// 22537 77182
 21550 406// 0

TTBB 7316/ 72HMS 00877 23666 11837 19065 22700 07660 33590 02140
 44549 05957 55472 14341 66464 15357 77427 19766 88400 23373 99354
 28372 11300 374// 22177 585// 33152 615// 44126 607// 55120 625//
 66100 641// 51515 10186 //850 20667 0

TTCC 73167 72HMS 70877 587// 13010 50088 545// 88999 77999 0

TTDD 7316/ 72HMS 11813 645// 22796 625// 33700 587// 44639 593//
 55500 545// 0

ROCKETSONDE: No Flight This Date

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Landsat B

DATE OF OBSERVATION 27 June 1977

TIME 1038 (Local) 1638 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T ^a	30.7	30.7	30.7		34.5
T ^{dp}	7.8	7.8	8.2		8.3
W _d , W _s	010 2.5	010 2.5	360 1.8		360 3.1
P	26.09	26.09	25.55		25.95
C	75 ⊕	75 ⊕	⊙		70 ⊕ 180 ⊕
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	90.86	90.86	81.38		88.36
I ^a	71.60	71.60	61.34		69.45
I ^d	45.34	45.34	40.13		43.86
N	86.97	86.97	89.49		87.51
N ^a	63.73	63.73	67.73		63.26
N ^b	58.24	58.24	63.04		55.38
N ^c	47.51	47.51	50.84		47.29
N ^d	39.34	39.34	42.78		38.00
i	47.74	53.81	4.62		23.52
i ^a	missing	40.93	3.82		21.77
i ^d	25.67	25.53	2.73		15.60
T _{g/w}	33.8	36.0	41.5		41.7
T _s	missing	missing	47.5		40.0
ψ	19.5	19.2			6.3
ε					
El, Az	55.8 96.3	55.8 96.3	55.8 97.3		55.8 97.5
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 27 June 1977

TIME 1152 (Local) 1752 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	32.8 7.1 360 0.3 26.08 80 \odot No	32.8 7.1 360 0.3 26.08 80 \odot No	34.3 6.6 140 1.8 25.55 85 \odot No		34.7 6.2 310 2.0 25.94 60 \odot 150 \odot No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	97.48 74.17 45.34 89.91 65.39 59.64 48.56 40.23 48.35 missing 25.22	97.48 74.17 45.34 89.91 65.39 59.64 48.56 40.23 53.58 40.63 25.05	92.75 72.11 48.18 92.31 69.42 64.35 51.97 43.71 4.50 3.62 2.63		95.43 76.42 48.87 89.53 63.86 52.14 45.67 34.56 26.45 24.79 18.14
$T_{g/w}$ T_s ψ ϵ El, Az	41.8 missing 19.5 70.8 114.8	42.2 missing 19.2 70.8 114.8	48.0 52.0 70.6 116.6		52.0 48.5 6.3 70.9 113.3
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 27 June 1977

TIME 1238 (Local) 1838 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a	34.9	34.9	35.1		36.2
T_{dp}	6.8	6.8	7.7		6.0
W_d, W_s	020 1.5	020 1.5	260 1.3		255 2.5
P	26.07	26.07	25.52		25.92
C	65 (D)	65 (D)	65 (D)		60 (D) 140 (D) 250 (D)
M	No	No	No		
T_{a25}					
T_{dp25}					
I	102.21	102.21	100.09		92.06
I_a	76.31	76.31	79.17		73.52
I_d	48.41	48.41	50.19		49.15
N	90.93	90.93	92.31		90.34
N_a	66.16	66.16	69.61		65.48
N_b	59.90	59.90	64.54		59.42
N_c	49.04	49.04	51.78		48.71
N_d	40.61	40.61	43.53		41.63
i	50.18	57.00	6.39		25.91
i_a	missing	43.26	4.82		23.94
i_d	26.33	26.60	3.94		17.17
$T_{g/w}$	43.9	46.9	48.0		51.5
T_s	missing	missing	53.2		52.2
ψ	19.5	19.2			6.3
ϵ					
El, Az	78.4 143.4	78.4 143.4	78.0 145.6		78.8 141.5
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 27 June 1977

RADIOSONDE: (0800 MDT) TTAA 77141 72HMS 99874 24067 00000 00069
 ///// ///// 85506 26668 35011 70185 14664 30010 50592 07150 29003
 40763 17571 24002 30971 34361 28506 25096 441// 30522 20243 533//
 31031 15424 633// 29050 10669 665// 32050 88121 697// 30019 77105
 31558 41919

TTBB 7714/ 72HMS 00874 24067 11864 26667 22857 26868 33510 06148
 44492 08347 55479 08757 66431 14957 77400 17571 88371 21774 99283
 38162 11250 441// 22121 697// 33100 665//

TTCC 77142 72HMS 70886 627// 07521 50096 575// 08533 30425 507//
 13531 20692 469// 09542 88999 77999

TTDD 7714/ 72HMS 11913 667// 22773 625// 33463 577// 44408 525//
 55268 499// 66258 481// 77153 457//

ROCKETSONDE: (1225 MDT) RRXX 27183 72269 81010 13101 25552 10012
 30542 09014 35533 09026 36532 09025 38519 09030 39514 10026 40514
 10024 45511 09033 50000 10058 53503 10063 55505 10051 57*** 10058
 60*** 08037 61*** 08030 62*** 09030 64*** 09063 65*** 09070 69***
 08059 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 29 June 1977

TIME 1407 (Local) 2007 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	32.8	32.8	34.0		33.8
T _{dp}	9.9	9.9	7.0		13.7
W _d , W _s	130 2.7	130 2.7	340 2.2		340 1.3
P	26.03	26.03	25.50		25.92
C	E 190 ⊕	E 190 ⊕	E 70 ⊕		70 ⊕ E 180 ⊕
M	No	No	No		Yes
T _{a25}					
T _{dp25}					
I	99.68	99.68	99.00		106.42
I _a	76.31	76.31	79.75		81.07
I _d	46.61	46.61	51.72		53.40
N	74.46	74.46	78.24		79.19
N _a	54.79	54.79	60.41		57.37
N _d	50.83	50.83	56.29		52.53
N _c	41.12	41.12	45.78		43.64
N _d	35.12	35.12	39.40		35.76
i	missing	46.08	7.22		27.06
i _a	missing	42.15	5.63		22.97
i _d	26.67	23.30	4.55		16.57
T _{g/w}	39.8	41.5	49.0		40.0
T _s	44.2	45.0	58.0		49.2
ψ	20.0	19.8			6.1
ε					
El, Az	73.9 237.1	73.9 237.1	73.5 235.7		74.3 238.5
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 29 June 1977 TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d , W _s P C T _M T _{a25} T _{dp25}	missing missing 190 2.3 26.08 E180-Ⓢ No	missing missing 190 2.3 26.08 E180-Ⓢ No	34.5 7.3 190 4.9 25.55 75 Ⓢ No		32.8 14.1 135 2.3 25.96 70 Ⓢ E180 Ⓢ Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d	99.16 75.67 46.40 73.56 53.51 49.04 39.34 34.10 48.17 missing 25.67	99.16 75.67 46.40 73.56 53.51 49.04 39.34 34.10 55.75 42.35 25.73	100.55 79.75 50.96 70.73 53.47 49.34 39.77 34.33 6.86 5.33 4.25		103.48 79.88 51.04 77.98 58.38 53.74 44.04 36.36 25.39 21.64 15.48
T _{g/w} T _s ψ ε El, Az	41.8 42.3 20.0 80.2 168.6	41.8 42.3 19.8 80.2 168.6	47.9 54.0 79.7 170.0		39.9 46.3 6.1 80.7 167.5
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 29 June 1977

TIME 1007 (Local) 1607 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	27.1	27.1	29.0		26.4
T _{dp}	15.9	15.9	11.0		16.8
W _d , W _s	CALM	CALM	050 1.3		360 1.5
P	26.13	26.13	25.69		26.01
C	E 190 (11)	E 190 (11)	180 (11)		E 170 (11)
M	No	No	No		Yes
T _{a25}					
T _{dp25}					
I	55.04	55.04	74.13		33.95
I _a	35.69	35.69	55.44		25.32
I _d	23.73	23.73	36.55		15.60
N	67.94	67.94	81.05		
N _a	43.04	43.04	61.73		
N _b	35.12	35.12	57.60		
N _c	26.05	26.05	47.47		
N _d	21.71	21.71	39.59		
i	21.91	35.04	4.62		6.56
i _a	missing	27.36	3.72		6.05
i _d	10.67	16.70	2.93		4.11
T _{g/w}	29.5	28.1	37.0		37.0
T _s	33.1	30.5	43.0		43.0
ψ	20.0	19.8			6.1
ε					
El, Az	49.2 91.6	49.2 91.6	49.3 92.4		49.3 92.4
REMARKS: MET SAT 4 - No normal incoming data due to clouds					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 29 June 1977

RADIOSONDE: (0800 MDT) TTAA 79141 72HMS 99877 22462 32002 00071
 ///// ///// 85529 23865 32506 70195 12666 13011 50591 07150 07606
 40762 17061 36015 30971 32965 36012 25096 431// 34510 20243 547//
 08513 15422 673// 02008 10664 667// 36018 88135 711// 31508 77999

TTBB 7914/ 72HMS 00877 22462 11850 23865 22795 20668 33774 18864
 44750 17471 55622 04258 66601 02240 77566 01128 88449 11356 99420
 14971 11400 17961 22391 19359 53369 20762 44337 26560 55331 26963
 66283 36363 77200 547// 88135 711// 99100 667//

TTCC 79142 72HMS 70883 615// 04009 50083 565// 10013 30413 505//
 09019 20677 479// 09535 88999 77203 09535 40701

TTDD 7914/ 72HMS 11583 609// 22418 517// 33218 517// 44200 479//
 55138 451// 66115 389// 51515 10190 10144

ROCKETSONDE: (1200 MDT) RRXX 29181 72269 81010 63101 23554 08014
 25555 10017 26548 10016 27546 09013 30541 10021 35529 09023 40519
 09035 45502 09047 46// 08046 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION MIMBUS VI

DATE OF OBSERVATION 5 July 1977

TIME 1215 (Local) 1815 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s P C T_{a25}^M T_{dp25}			23.4 11.7 160 0.1 missing 85 Yes		25.1 17.7 CAL ^M missing 180- [Ⓚ] Yes
I I_a I_d N N_a N_b N_c N_d i i_a i_d			36.33 25.58 16.38 2.96 2.21 1.62		83.90 64.11 44.23 81.24 62.04 56.99 33.35 22.64 22.58 19.35 14.03
$T_{g/w}$ T_s ψ ϵ E_l, A_z			29.5 35.1 74.1 128.3		35.5 34.5 missing 74.6 124.6
REMARKS: MET SAT I - Not operated this day MET SAT II - No normal incoming data due to clouds					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
 Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
 Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 5 July 1977 TIME 1356 (Local) 1956 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s P C T_M T_{a25} T_{dp25}			30.7 17.8 170 2.1 missing E 85 \oplus Yes		
I I_a I_d N N_a N_b N_c N_d i i_a i_d			100.92 80.32 52.49 6.04 4.62 4.49		
$T_{g/w}$ T_s ψ ϵ E_l, A_z			46.8 48.3 75.19 227.3		
REMARKS: MET SAT I - Not operated this day MET SAT II - No normal incoming data due to clouds MET SAT IV - Not operated this observation					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
 Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
 Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 5 July 1977

RADIOSONDE: (0900 MDT) TTAA 55151 72HMS 99880 20238 23001 00140
 ///// ///// 85555 18456 17005 70199 08635 22008 50591 06563 22013
 40762 17558 24008 30971 323// 20006 25097 421// 17012 20244 551//
 15508 15423 663// 24503 10667 683// 14013 88124 689// 15013 77999

TTBB 5515/ 72HMS 00880 20238 11753 12850 22628 03410 33589 00856
 44543 03700 55537 04369 66530 03173 77505 05776 88500 06563 99481
 07976 11412 15757 22400 17558 33377 20559 44365 21957 55322 28359
 66302 31569 77300 323// 88200 551// 99150 663// 11124 689// 22100
 683// 51515 SUPER 30-30

TTCC 55151 72HMS 70884 643// 13016 50094 595// 09020 30419 525//
 10029 20683 501// 08031 10145 395// 88999 77103 09047 40203

TTDD 5515/ 72HMS 11918 655// 22700 643// 33638 593// 44533 567//
 55500 593// 66383 585// 77319 509// 88300 525// 99133 473// 11120
 427// 22100 395// 33083 393// 51515 10190 07389

ROCKETSONDE: (1200 MDT) RRXX 05180 72269 81010 13101 25553 10014
 29547 09022 30541 08020 35534 09027 36526 08029 38524 09029 40515
 09031 42513 10044 45505 08039 50510 10053 52507 10056 53512 10059
 55512 10052 60527 09049 61531 09053 62535 10061 63539 10065 65//
 09040 66/// 07050 67/// 07060 68/// 06045 69/// 03020 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION: NOAA V

DATE OF OBSERVATION 6 July 1977

TIME 1040 (Local) 1640 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d , W _s P C M T _{a25} T _{dp25}					28.3 15.0 CALM missing 55 ① Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d					78.02 60.39 37.81 87.88 63.84 58.79 47.68 39.39 27.12 17.17 12.21
T _{g/w} T _s ψ ε El, Az					49.3 47.6 missing 55.6 96.5
REMARKS: MET SAT I , II - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG595
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 6 July 1977

TIME 1235 (Local) 1835 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d , W _s P C T _M T _{a25} T _{dp25}					32.3 14.3 015 3.6 missing 70 Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d					95.54 74.22 46.88 91.31 65.45 60.00 48.48 40.20 34.35 21.64 15.36
T _{g/w} T _s ψ ε El, Az					60.8 59.6 missing 77.7 138.8
REMARKS: MET SAT I,II - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG69
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 6 July 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a T_{dp} W_d W_s P C T_M T_{a25} T_{dp25}					31.7 13.9 060 1.0 missing 70 (D) Yes
I I_a I_d N N_a N_b N_c N_d i i_a i_d					96.41 74.22 47.64 90.50 65.05 59.80 48.48 40.40 34.49 21.52 15.24
$T_{g/w}$ T_s ψ ϵ E_l, A_z					59.7 59.4 missing 80.2 166.3
REMARKS: MET SAT I,II - Not operated this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 6 July 1977

RADIOSONDE: (0900 MDT) TTAA 56151 72HMS 99879 25861 00000 00116
 ///// ///// 85555 20862 17005 70199 10059 34009 50590 05569 34007
 40761 18564 10001 30970 33759 23510 25095 431// 26013 20242 543//
 22508 15421 651// 33504 10664 699// 14007 88104 705// 14007 77999

TTBB 5615/ 72HMS 00879 25861 11869 22464 22795 18062 33744 13458
 44700 10059 55621 02950 66564 01557 77547 01559 88523 04558 99506
 06164 11500 05569 22448 11966 33426 14767 44412 17169 55400 18564
 66360 23558 77334 26565 88274 38361 99170 621// 11150 651// 22104
 706// 33100 699//

TTCC 56155 72HMS 70885 649// 10016 50091 621// 10508 88999 77670
 10018 40609

TTDD 5615/ 72HMS 11848 651// 22700 649// 33598 619// 44500 621//

ROCKETSONDE: (1200 MDT) RRXX 06181 72269 81010 63101 26549 10018
 30543 10020 35532 09025 39524 09032 40523 08039 41515 09046 42508
 10046 45504 10048 47504 11047 48504 11043 49504 10045 50505 09059
 52508 09054 55513 09061 60529 10062 62537 06052 64546 08058 65550
 10052 66556 13037 67562 14026 68/// 09025 69/// 06053 70/// 07081
 72/// 06054 73/// 04031 74/// 02020 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 13 July 1977

TIME 1203 (Local) 1903 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	30.8	30.8			32.3
T _{dp}	12.7	12.7			12.6
W _d W _s	240 4.0	240 4.0			160 1.5
P	25.88	25.88			26.02
C	65 OE 190	65 OE 190			60 OE 180
M	Yes	Yes			No
T _{a25}					
T _{dp25}					
I	84.79	84.79			93.04
I _a	78.89	78.89			74.68
I _d	48.52	48.52			47.35
N	83.65	83.65			88.48
N _a	60.20	60.20			63.03
N _b	55.13	55.13			57.58
N _c	44.87	44.87			46.67
N _d	22.05	22.05			38.79
i	46.37	46.40			25.51
i _a	37.23	40.60			23.10
i _d	22.34	25.25			16.69
T _{g/w}	44.7	43.4			50.9
T _s	34.5	44.0			51.7
ψ	22.7	21.2			1.1
ε					
El, Az	71.5 121.8	71.5 121.8			71.7 120.3
REMARKS: MET SAT II - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 13 July 1977

TIME 1214 (Local) 1814 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	32.1	32.1			32.8
T _{dp}	13.7	13.7			12.5
W _d , W _s	270 2.7	270 2.7			CALM
P	25.90	25.90			26.01
C	65 \odot E190 \odot	65 \odot E190 \odot			60 \odot 180 \odot E220 \odot
M	Yes	Yes			No
T _{a25}					
T _{dp25}					
I	82.68	82.68			94.89
I _a	78.14	78.14			76.77
I _d	49.79	49.79			48.87
N	84.79	84.79			89.49
N _a	61.60	61.60			64.65
N _b	56.27	56.27			59.20
N _c	45.25	45.25			48.08
N _d	38.28	38.28			40.00
i	49.16	49.15			26.09
i _a	39.61	41.94			23.70
i _d	23.65	24.65			17.17
T _{g/w}	44.7	43.4			51.7
T _s	34.5	44.0			53.1
Ψ	22.7	21.2			1.1
ϵ					
El, Az	73.4 127.4	73.4 127.4			73.6 125.8
REMARKS: MET SAT II - Not operated this day					

LEGEND

T_a = Air Temperature ($^{\circ}$ C); T_{dp} = Dew Point Temperature ($^{\circ}$ C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}$ C), Dew Point Temperature ($^{\circ}$ C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

T_{g/w} = Soil or Water Temperature ($^{\circ}$ C); T_s = Surface Temperature ($^{\circ}$ C); Ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 13 July 1977

TIME 1300 (Local) 1900 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d W _s P C M T _{a25} T _{dp25}	33.5 13.1 195 0.9 25.87 60 (180) Yes	33.5 13.1 195 0.9 25.87 60 (180) Yes			34.6 13.1 180 3.0 26.01 60 (180) (220) No
I I _a I _d N N _a N _b N _c N _d i i _a i _d	102.75 96.57 59.85 86.31 53.61 48.92 missing missing 57.12 46.33 27.95	102.75 96.57 59.85 86.31 53.61 48.92 missing missing 56.57 50.30 31.69			79.33 61.90 38.27 47.47 34.95 33.54 27.68 23.84 20.27 17.78 12.70
T _{g/w} T _s ψ ε	38.1 37.0 22.7	45.7 46.5 21.2			54.5 53.1 1.1
El, Az	79.7 167.4	79.7 167.4			80.2 166.3
REMARKS: MET SAT II - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 13 July 1977

TIME 1448 (Local) 2048 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s P C T_M T_{a25} T_{dp25}	34.0 11.6 200 6.3 25.86 65 \odot E300 \odot Yes	34.0 11.6 200 6.3 25.86 65 \odot E300 \odot Yes			36.8 13.1 205 3.0 25.99 60 \odot 180 \odot E220 \odot No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	83.95 78.35 47.03 87.45 62.99 57.67 44.74 39.92 48.04 38.78 22.95	83.95 78.35 47.03 87.45 62.99 57.67 44.74 39.92 43.54 40.90 25.45			92.97 73.05 46.50 88.48 63.63 58.38 47.07 38.79 25.22 22.97 16.81
$T_{g/w}$ T_s ψ ϵ El, Az	39.4 38.3 22.7 65.9 249.3	47.5 45.0 21.2 65.9 249.3			55.8 53.8 1.1 66.2 250.3
REMARKS: MET SAT II - Not operated this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 13 July 1977

RADIOSONDE: (0900 MDT) TTAA 63151 72HMS 99877 27469 18010 00074
 ///// ///// 85536 24267 14517 70195 12263 19006 50591 06748 19510
 40762 18358 21008 30971 32765 17008 25097 525// 14507 20244 539//
 11511 15423 651// 08004 10567 665// 19009 88128 705// 08007 77999

TTBB 6315/ 72HMS 00877 27469 01850 24267 22823 21866 33816 22268
 44647 07058 55644 06456 66538 03964 77535 04561 88521 05376 99513
 06126 11500 06748 22483 09134 33446 15157 44423 15157 55403 17960
 66400 18358 77394 18757 88377 20368 99342 25561 11291 34165 22165
 631// 33128 705// 44100 665// 51515 SUPER 65-64 10186 //619 04659
 //588 00856

TTCC 63155 72HMS 70886 601// 11012 50096 575// 10022 30423 509//
 88999 77383 08050 41718

TTDD 6315/ 72HMS 11700 601// 22580 611// 33300 509//

ROCKETSONDE: (1200 MDT) RRXX 13181 72269 81010 63101 25552 10017
 30544 08025 32535 10025 35535 10026 36535 10029 39520 09036 40521
 09042 45507 10055 47503 10050 50505 11043 51508 10040 55520 09058
 58530 10061 59534 09063 60537 08075 61535 09091 62532 10087 63530
 11070 65537 13039 66541 13024 67547 11014 68551 04018 70559 06040
 72/// 08048 73/// 09035 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 15 July 1977

TIME 0957 (Local) 1557 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	24.8	24.8			27.2
T _{dp}	16.5	16.5			15.2
W _d , W _s	250 3.1	250 3.1			020 3.0
P	26.02	26.02			26.11
C	85 (250-0)	85 (250-0)			60 (170-240)
M	No	No			Yes
T _{a25}					
T _{dp25}					
I	39.70	39.70			53.32
I _a	35.80	35.80			40.65
I _d	23.52	23.52			24.57
N	47.53	47.53			77.98
N _a	Missing	Missing			49.70
N _b	Missing	MISSING			41.82
N _c	22.18	22.18			31.72
N _d	19.39	19.39			25.25
i	19.97	16.74			13.09
i _a	11.27	12.69			12.09
i _d	8.61	8.85			8.46
T _{g/w}	21.7	25.4			35.5
T _s	23.3	25.5			33.3
ψ	missing	17.2			1.3
ε					
El, Az	45.9 92.0	45.9 92.0			45.8 91.4
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 15 July 1977 TIME 1027 (Local) 1627 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s P C T_{a25} T_{dp25}	20.0 18.7 290 3.1 26.01 85 \odot 250- \odot No	20.0 18.7 290 3.1 26.01 85 \odot 250- \odot No			27.6 14.9 030 4.1 26.10 60 \odot 170 \odot 240 \odot Yes
I I_a I_d N N_a N_b N_c N_d i i_a i_d	69.27 63.88 40.47 81.75 58.94 53.36 44.36 38.15 36.73 30.71 17.74	69.27 63.83 40.47 81.75 58.94 53.36 44.36 38.15 29.66 19.70 17.51			77.80 60.74 38.00 85.45 62.22 56.97 46.87 39.19 19.98 18.14 12.94
$T_{g/w}$ T_s ψ ϵ E_l, A_z	25.4 33.8 missing 52.1 96.6	32.8 28.5 17.2 52.1 96.6			37.2 36.3 1.3 52.1 95.9
REMARKS: MET SAT II - Not operated this day					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = S. Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 15 July 1977

TIME 1036 (Local) 1636 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	26.2	26.2			28.8
T _{dp}	15.7	15.7			9.5
W _d , W _s	320 3.1	320 3.1			010 3.0
P	26.01	26.01			26.10
C	85 (1) 250- (1)	85 (1) 250- (1)			60 (1) 170 (1) 240 (1)
M	No	No			Yes
T _{a25}					
T _{dp25}					
I	62.83	62.83			79.54
I _a	42.34	42.34			62.60
I _d	16.31	16.31			38.85
N	66.16	66.16			86.26
N _a	62.99	62.99			62.42
N _b	36.63	36.63			57.17
N _c	29.91	29.91			46.67
N _d	15.21	15.21			38.79
i	30.17	18.64			20.37
i _a	23.27	13.28			18.38
i _d	13.13	6.84			13.18
T _{g/w}	27.7	33.0			37.7
T _s	26.1	29.5			36.3
ψ	missing	17.2			1.3
ε					
E1, Az	54.0 98.1	54.0 98.1			54.0 97.4
REMARKS: MET SAT I - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 15 July 1977

RADIOSONDE: (0905 MDT) TTAA 65141 72HMS 99881 22659 05005 00128
 ///// ///// 85567 21059 02514 70221 11658 16517 50592 07170 17514
 40763 17959 19014 30972 34159 23006 25097 441// 20004 20243 551//
 14008 15422 659// 12014 10665 691// 11005 88109 723// 14008 77999

TTBB 6514/ 72HMS 00881 22659 11788 17058 22752 16459 33579 01156
 44555 02959 55553 02564 66539 03366 77514 06363 88511 06368 99484
 08570 11476 09564 22469 09772 33425 15171 44423 15561 55400 17960
 66377 21159 77364 23166 88338 27559 99264 41158 11169 627// 22150
 659// 33142 653// 44132 687// 55109 723// 66102 713// 77101 687//
 88100 691//

TTCC 65142 72HMS 70882 615// 09521 50092 583// 07525 30418 509//
 10525 20684 465// 08036 88999 77156 08045 407//

TTDD 6514/ 72HMS 11700 615// 22392 565// 33300 509// 44152 453//

ROCKETSONDE: (1205 MDT) RRXX 15181 72269 81010 13101 25551 08018
 28543 10018 30544 10019 35530 09028 40523 08043 42515 09050 45506
 10038 47506 09049 49502 10044 50504 10049 55517 09049 56519 09048
 57522 09049 60530 08083 61534 09085 64544 10071 65548 11059 66//
 11046 67// 10045 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 20 July 1977

TIME 1021 (Local) 1611 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T ^a T ^{dp} W _d P _s C T ^M _{a25} T ^{dp} ₂₅	26.9 14.5 Calm 25.84 180-⊙ No	26.9 14.5 Calm 25.84 180-⊙ No			28.6 15.0 060 0.9 25.98 60⊙E140⊙250⊙ Yes
I I ^a I ^d N N ^a N ^b N ^c N ^d i i ^a i ^d	22.70 19.83 14.83 54.61 38.88 31.06	22.70 19.83 14.83 54.61 33.73 21.13			40.04 31.94 missing 9.41 9.07 7.26
T _{g/w} T _s ψ _s ε El, Az	33.4 31.4 12.7 48.3 95.1	31.2 28.0 16.3 48.3 95.1			38.7 35.5 1.2 48.3 94.5
REMARKS: MET SAT I, IV - No normal incoming due to clouds METSAT II - Not Operated This Day.					

LEGEND

T^a = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 20 July 1977

TIME 1153 (Local) 1753 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	31.2	31.2			31.5
T _{dp}	13.0	13.0			13.4
W _d	CALM	CALM			060 1.0
P	25.84	25.84			25.98
C	60 ① 170 ② 210 ③	60 ① 170 ② 210 ③			80 ① E140 ②
M	No	No			Yes
T _{a25}					
T _{dp25}					
I	79.62	79.62			91.95
I _a	72.24	72.24			62.72
I _d	45.76	45.76			missing
N	84.16	84.16			
N _a	60.46	60.46			
N _b	55.51	55.51			
N _c	44.87	44.87			
N _d	38.78	38.78			
i	44.69	42.58			17.56
i _a	33.71	36.87			15.48
i _d	20.34	22.74			10.76
T _{g/w}	37.7	49.2			41.8
T _s	39.0	43.1			46.0
ψ	12.7	16.3			1.2
ε					
El, Az	68.8 119.7	68.8 119.7			69.0 118.4
REMARKS: MET SAT II - Not operated this day MET SAT IV - No normal incoming data due to clouds					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Noon Run

DATE OF OBSERVATION 20 July 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d , W _s P C M T _{a25} T _{dp25}	32.8 12.3 040 2.2 25.82 60 170 200 250 No	32.8 12.3 040 2.2 25.82 60 170 200 250 No			32.1 13.1 060 0.5 25.95 75 100 250 Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d	90.60 83.71 51.69 85.42 61.72 56.65 46.01 39.67 51.82 41.16 24.85	90.60 83.71 51.69 85.42 61.72 56.65 46.01 39.67 48.94 42.99 26.56			113.38 87.80 missing 78.18 53.54 47.88 41.62 35.56 39.10 26.24 18.74
T _{g/w} T _s ψ ε	45.7 44.2 12.7	51.7 48.7 16.3			44.7 52.5 1.2
El, Az	77.7 167.4	77.7 167.4			78.2 166.4
REMARKS: MET SAT II - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 20 July 1977 TIME 1419 (Local) 2019 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d W _s P C M T _{a25} T _{dp25}	34.1 14.6 270 1.8 25.79 60 ① 170 ① E 200 ① No	34.1 14.6 270 1.8 25.79 60 ① 170 ① E 200 ① No			34.1 17.3 060 0.5 25.93 85 ① E 250 ① Yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d	85.74 79.96 47.67 53.99 40.30 37.26 30.42 23.95 51.12 40.12 23.35	85.74 79.96 47.67 53.99 40.30 37.26 30.42 23.95 47.25 41.19 24.75			77.91 62.60 missing 19.59 17.41 13.30
T _{g/w} T _s ψ ε	45.7 43.0 12.7	50.8 47.2 16.3			46.7 52.3 1.2
E _l , A _z	70.8 235.5	70.8 235.5			71.1 236.6
REMARKS: MET SAT II - Not operated this day MET SAT IV- No normal incoming data due to clouds					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 20 July 1977

RADIOSONDE: (0900 MDT) TTAA 70151 72HMS 99876 24864 09002 09079
 ///// ///// 85520 22062 06501 70163 12660 32504 50589 06359 17510
 40760 16359 18510 30970 32357 24504 25096 419// 25008 20243 545//
 06508 15422 647// 05006 10666 663// 09002 88120 701// 08010 77999

TTBB 7015/ 72HMS 00876 24864 11850 22062 22746 16865 33700 12660
 44589 02257 55571 00865 66556 00756 77531 02774 88514 04175 99500
 06359 11480 07956 22457 09757 33421 14747 44400 16359 55350 23760
 66338 25557 77264 39360 88169 623// 99120 701// 11109 671// 22100
 663//

TTCC 70152 72HMS 70885 627// 09520 50096 565// 12523 30423 507//
 09528 20543 497// 08531 88999 77360 06537 41610

TTDD 7015/ 72HMS 11700 627// 22468 543// 33404 565// 44250 461//
 55200 497// 66156 445//

ROCKETSONDE: (1200 MDT) RRXX 20183 72260 81010 63101 26552 09014
 30543 09022 35532 10021 37528 09031 40519 11028 41519 09028 42516
 08037 43513 08044 45508 10044 46506 11042 47509 12041 48512 11049
 50508 10057 51511 10058 52507 09058 53504 09052 55512 09044 56515
 07033 57520 08018 60534 10032 61539 10044 62545 10052 63/// 12057
 64/// 13059 65/// 11049 66/// 07062 67/// 06083 68/// 05068 69///
 02028 70/// 30024 71/// 28023 72/// 21004 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 21 July 1977 TIME 0950 (Local) 1550 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d , W _s P C M T _{a25} T _{dp25}					28.1 15.8 065 2.0 26.04 60 ⊖ 250- ⊕ No
I I _a I _d N N _a N _b N _c N _d i i _a i _d					38.19 29.97 missing 37.17 26.67 23.84 20.40 15.35 10.09 9.19 6.77
T _{g/w} T _s Ψ ε El, Az					28.5 32.0 1.4 43.8 91.6
REMARKS: MET SAT I & II - Not operated this day					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS V7

DATE OF OBSERVATION 21 July 1977

TIME 1152 (Local) 1752 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d , W _s C T _{a25} T _{dp25}					31.7 16.8 065 2.6 26.05 No
I I _a I _d N N _a N _b N _c N _d i i _a i _d					93.69 73.64 missing 79.39 57.58 52.73 44.04 36.36 23.96 21.89 15.96
T _{g/w} T _s ψ ε El, Az					41.6 36.0 1.4 68.7 118.4
REMARKS: MET SAT I & II - Not operated this day					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 21 July 1977

RADIOSONDE: (0900 MDT) TTAA 71741 72HMS 99878 23666 15010 00098
 ///// ///// 85539 21860 15006 70203 12662 10017 50593 05573 12018
 40764 17567 14519 30973 32957 04008 25099 41759 02020 20246 543//
 08019 15425 681// 07513 10670 675// 08515 88139 697// 08040 77999

TTBB 71140 72HMS 00878 23666 11860 21859 22850 21860 33844 22860
 44708 20061 55754 19466 66700 12662 77663 09059 88634 06463 99575
 00562 11562 02167 22547 01176 33456 09173 44400 17567 55330 27966
 66318 29757 77300 32957 88295 33596 99250 41959 11176 611// 22139
 697// 33128 659// 44121 681// 55100 675// 51515 SUPER 75-70 30-30

TTCC 71141 72HMS 70888 631// 08520 50098 571// 08523 30425 509//
 10023 20691 491// 09540 10158 425// 08562 88999 77032 08570 410//

TTDD 7114/ 72HMS 11932 635// 22700 631// 33500 571// 44370 557//
 55327 509// 66300 509// 77239 467// 88200 491// 99146 417// 11100
 425// 22086 357// 51515 10190 07406

ROCKETSONDE: (1200 MDT) RRXX 21180 72269 81010 63101 25552 09020
 30545 09024 31534 10027 33535 10021 35533 09031 40518 08028 42518
 09042 45509 09050 47504 09051 48504 09052 50508 10038 51510 10036
 52512 10045 53513 10051 55514 11044 56517 09046 57520 08059 60522
 08062 61526 09062 62530 11058 63534 13050 65543 16016 66548 32006
 67554 35022 68// 02034 69// 04065 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 26 July 1977

TIME 0943 (Local) 1543 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	23.8	23.8			28.3
T _{dp}	15.2	15.2			13.3
W _d , W _s	040 1.8	040 1.8			065 1.0
P	25.97	25.97			26.10
C	200 ☉	200 ☉			250- ☉
M	Yes	Yes			Yes
T _{a25}					
T _{dp25}					
I	54.68	64.68			60.07
I _a	49.63	49.63			47.97
I _d	32.63	32.63			29.76
N	78.20	78.20			81.62
N _a	57.03	57.03			60.61
N _b	52.22	52.22			54.75
N _c	42.84	42.84			46.26
N _d	36.63	36.63			38.38
i	30.03	27.44			13.87
i _a	24.10	24.78			12.94
i _d	15.13	15.69			9.55
T _{g/w}	26.7	27.2			42.0
T _s	22.4	23.0			37.1
ψ	20.6	19.3			2.2
ε					
E1, Az	41.9 92.4	41.9 92.4			41.8 91.9
REMARKS: MET SAT II - Not operated this date					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 26 July 1977 TIME 1149 (Local) 1749 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a	29.9	29.9			31.1
T_{dp}	13.2	13.2			14.4
W_d, W_s	210 2.7	210 2.7			060 4.1
P	25.99	25.99			26.10
C	70 ① 200 ①	70 ① 200 ①			250- ①
T_{a25}	Yes	Yes			Yes
T_{dp25}					
I	91.84	91.84			90.10
I_a	72.02	72.02			70.03
I_d	52.44	52.44			43.29
N	85.42	85.42			85.25
N_a	61.34	61.34			62.83
N_b	56.27	56.27			57.17
N_c	45.63	45.63			48.08
N_d	39.04	39.04			39.80
i	41.34	39.94			21.34
i_a	32.47	35.07			19.47
i_d	19.84	21.73			14.15
$T_{g/w}$	35.5	33.8			missing
T_s	36.3	33.5			45.6
ψ	20.6	19.3			2.2
ϵ					
El, Az	67.3 120.5	67.3 120.5			67.5 119.8
REMARKS: MET SAT II - Not operated this date					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 26 July 1977

TIME 1159 (Local) 1759 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	30.1 13.6 230 2.2 26.00 70 \oplus 200 \oplus Yes	30.1 13.6 230 2.2 26.00 70 \oplus 200 \oplus Yes			31.3 14.5 060 4.1 26.10 250- \oplus Yes
I I_a I_d N N_a N_b N_c N_d i i_a i_d	92.45 72.65 46.19 85.42 61.09 56.02 45.50 39.16 41.62 32.68 20.14	92.45 72.65 46.19 85.42 61.09 56.02 45.50 39.16 39.51 34.93 21.53			90.75 70.85 43.60 86.87 64.85 56.97 46.87 37.78 21.44 19.95 14.51
$T_{g/w}$ T_s ψ ϵ El, Az	35.9 36.9 20.6 69.1 124.7	33.7 33.7 19.3 69.1 124.7			missing 45.9 2.2 69.3 123.4
REMARKS: MET SAT II - Not operated this date					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 26 July 1977

RADIOSONDE: (1005 MDT) TTAA 76161 72HMS 99881 28265 00000 00138
 ///// ///// 85575 25066 22002 70249 12661 14509 50596 05771 14009
 40767 17368 18016 30976 32360 17022 25102 431// 16021 20249 533//
 15530 15430 639// 15540 10673 707// 11512 88108 725// 15013 77999

TTBB 7616/ 72HMS 00881 28265 11850 25066 22700 12661 33612 03248
 44603 03061 55560 01763 66549 03558 77543 03762 88525 04370 99509
 05367 11500 05771 22483 06573 33400 17368 44373 20170 55300 32360
 66259 41159 77250 431// 88200 533// 99171 599// 11150 639// 22140
 641// 33123 689// 44114 715// 55108 725// 66105 701// 77100 707//
 51515 SUPER 56-55

TTCC 76162 72HMS 70891 633// 09505 50102 567// 11022 30430 515//
 08026 20695 487// 08540 88999 77159 09546 40903

TTDD 7616/ 72HMS 11928 671// 22809 621// 33700 633// 44618 619//
 55538 539// 66500 567// 77479 549// 88433 567// 99333 511// 11300
 515// 22200 487// 33123 403// 51515 10190 10163

ROCKETSONDE: (1100 MDT) RRXX 26175 72269 81010 13101 25552 08020
 30541 09022 32540 10024 33540 10025 35528 10023 37529 10022 40522
 08035 45507 11048 50503 09034 55523 09031 57524 08051 60532 09067
 62539 10061 63539 10049 64535 09040 65/// 07067 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 27 July 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	32.8	32.8			34.1
T _{dp}	17.9	17.9			11.3
W _d W _s	180 3.6	180 3.6			070 2.0
P	25.97	25.97			26.05
C	250 ①	250 ①			250 - ②
M	No	No			No
T _{a25}					
T _{dp25}					
I	96.71	96.71			93.14
I _a	76.03	76.03			73.87
I _d	47.88	47.88			45.68
N	82.38	82.38			89.09
N _a	59.06	59.06			65.25
N _b	54.37	54.37			59.80
N _c	43.73	43.73			46.46
N _d	37.09	37.09			41.21
i	46.51	45.76			22.79
i _a	36.30	40.30			21.04
i _d	22.34	24.85			15.11
T _{g/w}	36.4	39.3			Missing
T _s	39.6	43.2			57.0
ψ	20.4	17.8			1.3
ε					
E ₁ , A _z	76.3 168.3	76.3 168.3			76.8 167.5
REMARKS: METSAT II - Not operated this day.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)

ε = Emissivity (%); E₁, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 27 July 1977 TIME 1349 (Local) 1949 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
"	34.7	34.7			35.2
"	13.2	13.2			9.7
W _d , W _s	170 3.1	170 3.1			CALM
C	25.95	25.95			26.05
T _{a25}	250 - ⊕	250 - ⊕			250 - ⊕
T _{dp25}	No	No			No
l	97.20	97.20			93.91
I _a	77.40	77.40			75.26
I _d	47.78	47.78			46.83
N	86.69	86.69			87.88
N _a	68.86	68.86			63.03
N _b	57.54	57.54			55.96
N _c	46.51	46.51			42.63
N _d	39.29	39.29			37.98
i	46.79	46.50			23.08
i _a	36.71	40.90			21.40
i _d	22.95	25.15			15.48
T _{g/w}	42.0	42.2			46.7
T _s	38.0	45.8			56.0
ψ	20.4	17.8			1.3
ε					
El, Az	74.2 214.1	74.2 214.1			74.7 214.9
REMARKS: METSAT II - not operated this day.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition_s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: l = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 27 July 1977

RADIOSONDE: (0800 MDT) TTAA 77141 72HMS 99880 21058 00000 00117 /////
 85559 26063 15009 70232 12058 18007 50595 05364 26507 40766 18331 24008 30976
 32164 20016 25101 413// 21025 20249 523// 21527 15429 657// 20519 10670 729//
 09507 88113 733// 15505 77999

TTBB 7714/ 72HMS 00880 21058 11850 26063 22623 03842 33596 00643 44578 00560
 55576 00564 66517 03169 77437 12962 88428 14558 99413 16556 11404 18120 22400
 18331 33392 18369 44362 21765 55279 36363 66163 625// 77113 733// 88100 729//
 51515 SUPER 44-43

TTCC 77141 72HMS 70883 623// 08521 50094 565// 08522 30421 515// 10030 20687
 473// 08038 10152 3751/ 10552 88999 77145 08552 40705

TTDD 7714/ 72HMS 11878 71/// 22700 623// 33578 575// 44388 555// 55208 473//
 66183 493// 77100 375// 88088 355//

ROCKETSONDE: (1230 MDT) RRXX 27183 72269 81010 63101 26551 09024 30541 10024
 33534 11016 35533 08022 40519 09037 45505 12047 50509 10040 52513 09041 55520
 08059 57519 10070 58518 11077 60529 14061 61536 15052 62537 15036 63535 10031
 64532 09044 65534 10028 66539 12012 68544 10025 70551 16024 72/// 26008 73///
 03008 74/// 07029 75/// 05034 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 2 August 1977

TIME 1016 (Local) 1616 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a T ^{dp} W _d P _s C T ^M _{a25} T ^{dp} ₂₅	26.8 12.5 120 4.5 25.92 220 - ⊕ Yes	26.8 12.5 120 4.5 25.92 220 - ⊕ Yes			28.8 15.2 CALM 26.04 250 - ⊕ Yes
I ^a I ^d N N ^a N ^b N ^c N ^d i i ^a i ^d	65.90 50.05 32.20 56.40 36.38 35.49 29.78 25.86 35.20 27.51 17.03	65.90 50.05 32.20 56.40 36.38 35.49 29.78 25.86 30.93 27.61 16.80			69.60 54.94 34.03 86.26 64.65 58.99 49.09 41.41 10.77 10.52 7.86
T _{g/w} T _s ψ ^s ε	MISSING MISSING 24.8	MISSING MISSING 18.5			34.2 35.0 5.0
E _l , Az	48.2 99.3	48.2 99.3			48.2 98.7
REMARKS: METSAT II - not operated this day.					

LEGEND

T = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W_d, W = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition ^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695

Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695

Global Outgoing: i = WG280, i^a = GG495, i^b = RG695

(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)

ε = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 2 August 1977

TIME 1036 (Local) 1636 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	28.1	28.1			29.9
T ^{dp}	12.9	12.9			13.9
W _d , W _s	120 4.5	120 4.5			CALM
P	25.92	25.92			26.04
C	220 - ⊕	220 - ⊕			250 - ⊕
T ^M _{a25}	Yes	Yes			Yes
T ^{dp} ₂₅					
I	67.84	67.84			73.56
I ^a	52.80	52.80			58.42
I ^d	33.79	33.79			36.11
N	68.82	68.82			86.87
N ^a	48.07	48.67			64.44
N ^b	45.37	45.37			58.99
N ^c	36.25	36.25			47.47
N ^d	30.93	30.93			40.81
i	35.06	33.47			11.15
i ^a	27.51	30.15			10.88
i ^d	17.33	18.81			7.98
T _{g/w}	MISSING	MISSING			35.0
T _s	MISSING	MISSING			35.2
ψ	24.8	18.5			5.0
e					
E _l , A _z	52.3 103.0	52.3 103.0			52.3 102.3
REMARKS: METSAT II - Not operated this day.					

LEGEND

T^a = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
e = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 2 August 1977

RADIOSONDE: (0800 MDT) TTAA 52141 72HMS 99878 22862 00000 00097 /////
85542 24264 06507 70223 14659 07010 50595 08562 01019 40766 17768 36006 30975
32362 31011 25101 41756 32013 20298 539// 32018 15429 665// 33021 88999 77158
32531 41415

TTBB 5214/ 72HMS 00878 22862 11850 24264 22829 26667 33700 14659 44612 04659
55547 02470 66507 07559 77500 08562 88492 07372 99477 07972 11400 17768 22332
26967 33326 27957 44321 28163 55300 32362 66272 38159 77267 38757 88250 41756
99241 43756 11200 539// 22150 665// 33124 719// 44113 699// 51515 10158

TTDD 5214/ 72HMS 51515 10150

ROCKETSONDE: No firing this day.

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 3 August 1977

TIME 1251 (Local) 1851 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	34.1	34.1			35.7
T _{dp}	10.9	10.9			11.1
W _d	100	100			060
P _s	2.7	2.7			2.1
C	25.87	25.87			25.97
M	70 \odot	70 \odot			\odot
T _{a25}	NO	NO			NO
T _{dp25}					
I _l	96.95	96.95			92.27
I _a	76.98	76.98			72.59
I _d	47.88	47.88			45.06
N	88.34	88.34			87.47
N _a	63.12	63.12			65.05
N _b	58.56	58.56			59.19
N _c	47.15	47.15			46.67
N _d	39.92	39.92			40.40
i	49.86	45.55			20.76
i _a	38.88	27.71			19.35
i _d	24.55	25.54			14.39
T _{g/w}	39.4	44.5			40.3
T _s	38.4	42.5			42.3
Ψ	14.8	14.5			2.1
e					
El, Az	74.4 161.5	74.4 161.5			74.9 160.6
REMARKS: METSAT II - Not operated this day.					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

T_{g/w} = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
e = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 3 August 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T ^a	34.2	34.2			35.7
T _{dp} ^a	10.8	10.8			11.1
W _d , W _s	140 2.7	140 2.7			060 2.1
P	25.87	25.87			25.97
C	70 \odot	70 \odot			\odot
M	No	No			No
T _{a25}					
T _{dp25}					
I	96.95	96.95			93.04
I ^a	77.19	77.19			73.29
I ^d	47.78	47.78			45.27
N	88.34	88.34			88.08
N ^a	63.24	63.24			64.65
N ^b	58.68	58.68			59.19
N ^c	47.28	47.28			48.69
N ^d	39.92	39.92			41.41
i	50.14	45.66			20.95
i ^a	38.99	27.72			19.59
i ^d	24.45	25.54			14.63
T _{B/W}	42.6	45.0			40.3
T _S	36.2	47.0			42.3
Ψ	14.8	14.5			2.1
ϵ					
E _l , Az	74.9 169.4	74.9 169.4			75.4 168.7
REMARKS: METSAT II - Not operated this day.					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^d = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

T_{B/W} = Soil or Water Temperature ($^{\circ}\text{C}$); T_S = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 3 August 1977

RADIOSONDE: (0700 MST) TTAA 53141 72HMS 99878 21662 00000 00097 /////
 85539 26066 16010 70200 14662 285// 50594 07160 04508 40763 17165 34010 30973
 31909 300// 25099 41939 30518 20246 531// 29522 15426 659// 30020 88999 77170
 09527 404//

TTBB 5314/ 72HMS 00878 21662 11860 23064 22854 26265 33727 16060 44700 14662
 55610 05658 66480 09561 77400 17165 88359 22758 99352 24533 11325 28501 22285
 349// 33258 40144 44232 46333 55150 659// 66119 717// 73113 69/// 51515 10158

ROCKETSONDE: (1100 MDT) RRXX 03174 72269 81010 63101 25552 08016 30543 10021
 35533 09024 40517 08033 45513 10049 46508 11047 50510 11047 55524 10052 58528
 08071 60527 09072 61527 10074 62531 11068 64539 13034 65545 11027 66548 08038
 67546 08047 69554 08045 70/// 08044 71/// 06029 JJJ

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 4 August 1977 TIME 1236 (Local) 1836 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _d W _s C M T _{a25} T _{dp25}	34.0 10.7 240 1.8 25.88 250 - ① No	34.0 10.7 240 1.8 25.88 250 - ① No			30.1 11.2 CALM 25.93 80 ① No
I I _a I _d N N _a N _b N _c N _d i i _a i _d	94.88 75.61 47.14 89.61 63.75 58.94 48.04 41.44 47.35 36.19 22.14	94.88 75.61 47.14 89.61 63.75 58.94 48.04 41.44 40.78 37.16 23.14			91.84 72.24 44.22 90.30 68.28 62.02 50.70 42.83 19.69 18.14 13.18
T _{g/w} T _s Ψ ε	45.0 42.0 18.9	51.3 47.3 17.8			46.3 51.2 0.9
E ₁ , Az	72.9 150.1	72.9 150.1			73.3 148.9
REMARKS: METSAT II - Not operated this day.					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG595
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%)
ε = Emisivity (%); E₁, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 7218

DATE OF OBSERVATION 4 August 1977

TIME 1442 (Local) 2042 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	38.0	38.0			36.6
T _{dp}	6.3	6.3			9.3
W _d , W _s	350 1.8	350 1.8			060 1.5
P	25.84	25.84			25.91
C	65 ① 250 - ①	65 ① 250 - ①			60 ①
M	No	No			No
T _{a25}					
T _{dp25}					
I	88.31	88.31			88.14
I _a	69.80	69.80			70.50
I _d	43.64	43.04			42.77
N	89.73	89.73			89.70
N _a	64.13	64.13			66.26
N _b	59.32	59.32			60.40
N _c	48.42	48.42			49.49
N _d	41.83	41.83			42.63
i	45.95	41.21			19.88
i _a	34.95	36.27			18.62
i _d	21.54	22.64			14.03
T _{g/w}	50.0	53.2			54.1
T _s	44.8	45.5			54.0
ψ	18.9	17.8			0.9
c					
Ei, Az	64.7 238.9	64.7 238.9			65.0 239.7

REMARKS:

METSAT II - Not operated this day.

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emissivity (%); Ei, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 4 August 1977

RADIOSONDE: (0700 MST) TTAA 54141 72HMS 99875 23067 00000 00067 /////
 85515 26668 14005 70190 14065 29009 50592 06968 15512 40763 17556 25510 30972
 33156 25013 25097 43150 26020 20244 535// 28026 15424 659// 27008 88999 77188
 29029 40918

TTBB 5414/ 72HMS 00875 23067 11858 26868 22627 06860 33583 02462 44523 04958
 55409 07770 66450 11966 77405 17145 88400 17556 99350 24357 11331 28150 22300
 33156 33281 36544 44243 44550 55167 621// 66128 713// 77117 723// 88114 709//
 99107 721// 11104 703// 51515 10190 10665 10158

TTDD 5414/ 72HMS 51515 10150

PPBB 54140 72HMS 30056 00000 14006 21006 90789 30013 34014 34510 91024 30009
 28008 25006 9168/ 17010 15510 92025 16014 19012 26009 93023 26008 24513 27019
 935// 26019 94025 28025 29029 28011 9503/ 24504 22504

PPDD 54140 72HMS

ROCKETSONDE: NO FIRING THIS DAY

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 8 August 1977

TIME 0948 (Local) 1548 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a	27.0	27.0			28.5
T_{dp}	12.8	12.8			14.5
W_d, W_s	160 0.9	160 0.9			150 4.1
P	25.92	25.92			26.06
C	0	0			0
M_{a25}	yes	yes			No
T_{dp25}					
I	61.51	61.51			59.85
I_a	47.73	47.73			47.97
I_d	31.99	31.99			28.72
N	63.40	63.40			81.82
N_a	61.34	61.34			60.61
N_b	56.27	56.27			55.15
N_c	45.88	45.88			45.66
N_d	40.05	40.05			37.78
i	30.03	28.71			15.62
i_a	23.08	24.93			14.75
i_d	14.33	22.99			11.61
$T_{g/w}$	39.2	42.1			40.3
T_s	27.2	36.0			32.5
ψ	19.3	18.1			0.4
ϵ					
E_l, A_z	41.6 97.1	41.5 97.1			41.5 96.6
REMARKS: METSAT II - NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 8 August 1977

RADIOSONDE: (0800MDT) TTAA 58141 72HMS 99876 22864 00000 00110 // // // //
 85526 24665 18512 70195 14061 24004 50592 05365 15006 40764 16768 1650930972
 33151 17502 25098 423// 00509 20245 527// 25013 15425 655// 35020 10669 663//
 12013 88130 701// 35515 77158 33523 41006

TTBB 5814/ 72HMS 00876 22864 11866 24464 22850 24665 33749 19263 44668 11059
 55609 05464 66549 00760 77529 02365 88500 05365 99493 05971 11437 12363 22423
 13768 33400 16768 44326 29561 55295 34346 66259 40359 77150 655// 88130 701//
 99133 663// 11100 663//

TTCC 5814/ 72HMS 88999 77999

TTDD 5814/ 72HMS 11918 663// 33723 645// 51515 10190 70886

ROCKETSONDE: (0800 MDT) RRXX 08160 72269 81010 13101 25547 08018 26550 07019
 30543 10024 32541 08019 35532 08029 36527 08029 37523 09028 40523 08014 41524
 07018 42517 07031 45513 09044 48504 10040 49502 11037 50506 10035 51510 08028
 52514 07028 53515 08042 54515 09053 55518 10052 57525 11051 58529 10058 59529
 10058 60527 09046 61524 08047 62521 09042 63521 12017 65534 19009 66540 13007
 69545 06014 70*** 06016

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 10 August 1977

TIME 1016 (Local) 1616 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T ^a T _{dp} ^w W _d ^p W _{s P C M T_{a25} T_{dp25}}	26.0 16.1 130 4.9 25.96 E120 ① No	26.0 16.1 130 4.9 25.96 E120 ① No			25.6 16.8 calm 26.04 E50 ① 200 ① No
I I ^a I ^d N N ^a N ^b N ^c N ^d i i ^a i ^d	87.94 70.75 55.93 41.90 33.20 21.04	87.94 70.75 55.93 42.80 54.18 31.29			61.48 49.01 30.39 39.80 33.33 32.12 27.07 24.04 15.32 14.15 11.12
T _{g/w} T _s Ψ ε El, Az	33.5 29.5 19.4 47.1 102.6	40.0 35.0 18.3 47.1 102.6			missing 32.4 0.8 47.1 102.0
REMARKS: METSAT I - NO NORMAL INCOMING DATA DUE TO CLOUDS METSAT II- NOT OPERATED THIS DAY					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG380, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 10 August 1977

TIME 1158 (Local) 1758 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT II		METSAT IV
T _a T _{dp} W _d W _s P C M T _{a25} T _{dp25}	29.0 14.6 200 3.6 25.93 60 ⊕ 120 ⊙ No	29.0 14.6 200 3.6 25.93 60 ⊕ 120 ⊙ No			38.5 10.2 calm 26.02 170 ⊕ No
I I _a I _d N N _a N _b N _c N _d i i _a i _d	91.35 69.80 43.43	91.35 69.80 43.43			59.52 47.97 30.91
T _{g/w} T _s ψ ε El, Az	33.5 31.7 19.4 missing	47.2 35.2 18.3 missing			44.7 44.6 0.8 missing
REMARKS: METSAT I, IV- NO NORMAL INCOMING DATA DUE TO CLOUDS MET SAT II- NOT OPERATED THIS DAY					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 10 August 1977

TIME 1230 (Local) 1830 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	29.9 15.1 140 3.6 25.91 00 120 - ① No	29.9 15.1 140 3.6 25.91 00 120 - ① No			29.2 15.8 070 3.1 26.00 E 180 ② No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	101.34 78.99 50.32 52.23 40.33 25.35	101.34 78.99 50.32 52.23 40.33 25.35			41.02 31.82 19.15 9.21 8.34 6.41
$T_{g/w}$ T_s Ψ ϵ E_l, A_z	43.3 40.3 19.4 70.7 149.2	45.1 43.0 18.3 70.7 149.2			38.9 38.6 0.8 71.1 148.2
REMARKS: MET SAT I, IV - NO NORMAL INCOMING DATA DUE TO CLOUDS MET SAT - NOT OPERATED THIS DAY					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (hPa); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%)
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOONRUN

DATE OF OBSERVATION 10 August 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	29.9	29.9			28.9
T _{dp}	14.1	14.1			16.2
W _d , W _s	100 2.7	100 2.7			calm
P	25.90	25.90			26.00
C	60 ⊙ 100 - ⊙	60 ⊙ 100 ⊙			E 170 ⊙
T _{a25}	No	No			No
T _{dp25}					
I	96.71	96.71			40.70
I _a	75.50	75.50			31.48
I _d	47.35	47.35			18.78
N	60.33	60.33			
N _a	53.74	53.74			
N _b	51.08	51.08			
N _c	36.88	36.88			
N _d	23.83	23.83			
i	50.40	46.50			9.21
i _a	38.88	40.75			8.46
i _d	24.15	25.25			6.41
T _{g/w}	45.5	47.3			39.3
T _s	42.1	44.0			39.3
ψ	19.4	18.3			0.8
ε					
E1, Az	72.8 171.3	72.8 171.3			73.3 170.7
REMARKS:					
MET SATII-NOT OPERATED THIS DAY					
MET SAT - IV NO NORMAL INCOMING DATA DUE TO CLOUDS					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 10 August 1977

TIME 1431 (Local) 2031 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	31.9	31.9			33.3
T _{dp}	13.4	13.4			14.4
W _d , W _s	120 6.7	120 6.7			070 3.1
P	25.86	25.86			25.95
C	60 ⊙ 120 ⊙	60 ⊙ 120 ⊙			100 ⊙
M	No	No			No
T _{a25}					
T _{dp25}					
I	89.65	89.65			89.55
I _a	66.10	66.10			71.08
I _d	49.47	49.47			42.56
N					89.70
N _a					63.84
N _b					58.59
N _c					47.47
N _d					39.80
i	37.71	31.04			19.20
i _a	29.58	26.12			17.65
i _d	17.64	15.90			13.06
T _{g/w}	44.0	45.7			53.3
T _s	40.0	43.0			57.3
ψ	19.4	18.3			0.8
ε					
El, Az	65.1 231.7	65.1 231.7			65.5 232.1
REMARKS: MET SAT I- NO NORMAL INCOMING DATA DUE TO CLOUDS MET SAT II - NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 10 August 1977

RADIOSONDE: (0600MDT) TTAA 60121 72HMS 99876 24459 00000 00061 /////
 /////< 85526 20458 19010 70191 12616 11010 50596 02505 32505 40770 11949
 02006 30984 25959 30007 25114 351// 31506 20266 461// 34517 15452 585//

TTBB 6012/ 72HMS 00876 24459 11850 20456 22782 19057 33700 12617 44669
 12049 55533 00203 66449 07107 77436 08956 88429 10766 99404 12362 11400
 11909 22397 26558 88272 30359 99165 555// 11150 585// 22140 585// 33126
 621// 44123 605// 55111 629// 66100 621// 51515 SUPER 44-43 34-33

TTCC 60121 72HMS 70929 569// 08511 50146 517// 08023 30482 465// 09033
 20755 389// 18035 10231 36711 08551 07480 301// 09560 05723 245// 88999
 77077 09060 40004

TTDD 6012/ 72HMS 11823 563// 22700 569// 33608 525// 44500 517// 55398
 475// 66258 463// 77219 303// 88150 391// 99118 391// 11100 367// 22087
 365// 33050 245//

ROCKETSONDE: (1100 DJ) UNUS 1 KWSO 11527

RRXX 10171 72269 81010 63101
 25550 09020 26553 09018 30541 10023 31536 10021 35534 10021 35534 10019
 36535 09024 37529 10031 40522 08035 41521 08037 42515 08039 43510 09041
 45511 09038 46512 09044 49509 10036 50512 10045 52511 09056 55519 11055
 56522 10056 57522 10056 58519 12046 59525 12034 60526 10039 61524 09052
 62527 10052 64538 13028 65546 10024 66547 08017 67540 22011 68539 23024
 70554 27012 72// 27028

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 17 August 1977

TIME 0959 (local) 1559 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T_a T_{dp} W_d, W_s C T_{a25} T_{dp25}					27.4 18.3 060 1.0 26.13 120 \odot yes
I_a I_d N_a N_b N_c N_d i_a i_d					60.04 49.48 30.91 82.83 61.62 56.77 46.46 38.18 13.43 12.82 9.92
$T_{g/w}$ T_s ψ ϵ El, Az					30.8 34.2 0.9 42.8 101.0
REMARKS: METSAT I - NOT OPERATED THIS OBSERVATION METSAT II - NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I_a = \text{WG280}, I_d = \text{GG495}, I_s = \text{RG695}$
 Normal Incoming: $N_a = \text{WG280}, N_b = \text{GG495}, N_c = \text{OG530}, N_d = \text{RG630}, N_s = \text{RG695}$
 Global Outgoing: $i_a = \text{WG280}, i_d = \text{GG495}, i_s = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 17 August 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT II		METSAT IV
T _a	29.0	29.0			32.2
T _{dp}	16.5	16.5			16.6
W _d , W _s	100 2.2	100 2.2			060 1.7
P	25.94	25.94			26.38
C	60 - (1) 220 (1) -	60 - (1) 220 - (1)			60 (1) 250 (1)
N	yes	yes			yes
T _{a25}					
T _{dp25}					
I	40.80	40.80			66.20
I _a	31.57	31.57			71.89
I _d	18.43	18.43			44.33
N					88.08
N _a					64.24
N _b					58.79
N _c					47.88
N _d					39.80
i	18.16	15.25			19.50
i _a	15.00	12.39			18.02
i _d	7.82	7.42			13.30
T _{g/w}	30.5	25.2			40.0
T _s	30.3	27.3			52.0
ψ	21.7	21.8			0.9
c					
E1, Az	70.7 173.1	70.7 173.1			71.2 172.6
REMARKS:					
MET SAT I - NO NORMAL INCOMING DATA DUE TO CLOUDS					
MET SAT II - NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
c = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 17 August 1977

TIME 1402 (Local) 2002 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a	29.4	29.4			34.8
T _{dp}	17.4	17.4			16.8
W _d W _s	070 2.2	070 2.2			060 2.1
P	25.93	25.93			26.08
C	E 60 (1) 90 (1) 200	E 60 (1) 90 (1) 200			60 (1) 260 (1)
M	yes	yes			yes
T _{a25}					
T _{dp25}					
I	37.03	37.03			89.61
I _a	28.72	28.72			70.62
I _d	16.31	16.31			43.08
N					65.66
N _a					49.49
N _b					31.31
N _c					22.63
N _d					21.21
i	17.46	13.77			19.98
i _a	14.27	11.19			18.02
i _d	7.82	6.74			13.30
T _{g/w}	31.3	45.1			50.4
T _s	27.7	25.7			52.5
ψ	21.7	21.8			0.9
ε					
E1, Az	67.4 215.1	67.4 215.1			67.9 215.7
REMARKS:					
MET SAT I - NO INCOMING DATA DUE TO CLOUDS					
MET SAT II- NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (h. Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 17 August 77

RADIOSONDE: (0700 MDT) TTAA 67141 72HMS 99879 18057 00000 00129 //

85553 23660 18006 70215 12257 21506 50594 05561 15007 40766 15175 22005
521// 09527 15433 655// 09520 20252 521// 09527 15433 655// 09527 88999
77167 11032 40814 0
TTBB 6714/ 72HMS 00879 18057 11869 22456 22855 24060 33783 19660 44635
05631 55627 04857 66568 00445 77482 07163 88460 07577 99400 15175 11332
26573 22132 715// 33110 727// 51515

TTDD 6714/ 72HMS 51515 10150 0

ROCKETSONDE: (1200 MST) RRXX 17182 72269 81010 63101 26548 09011 28546
08018 30538 09022 35529 11023 40520 09026 42512 09031 43505 09030 45512
11038 48508 10033 50507 08043 52509 09050 53511 10043 55157 10047 56521
10041 57521 11025 58522 14017 59526 08025 60531 07048 61529 08051 62525
11036 63527 16025 65539 27018 66540 32033 68537 32031 70541 30028 72***
31041 73/// 30048 74/// 31040

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 18 August 1977

TIME 1015 (local) 1615 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II		METSAT IV
T _a T _{dp} W _d W _s P _s C M T _{a25} T _{dp25}	25.6 17.2 280 4.0 25.98 E160 ⊕ 220 ⊕ yes	25.6 17.2 280 4.0 25.98 E160 ⊕ 220 ⊕ yes			29.0 15.7 calm 26.04 E160 ⊕ 250 ⊕ No
I I _a I _d N N _a N _b N _c N _d i i _a i _d	32.16 25.24 14.73 15.22 12.51 6.91	32.16 25.24 14.73 15.04 12.24 6.94			37.34 31.48 20.98 9.02 7.98 6.05
T _{g/w} T _s ψ ε El, Az	25.0 29.0 20.9 45.9 105.7	25.2 24.2 17.1 45.9 105.7			44.0 36.8 0.6 46.0 105.1
REMARKS: METSAT I & IV- NO NORMAL INCOMING DATA DUE TO CLOUDS METSAT II - NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%)
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 18 August 1977

TIME 1144 (Local) 1744 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11		METSAT 11
T_a T_{dp} W_d, W_s P C M T_{a25} T_{dp25}	26.1 15.7 340 2.2 25.98 E160 \oplus 220 \oplus yes	26.1 15.7 340 2.2 25.98 E160 \oplus 220 \oplus yes			32.0 17.4 calm 26.03 160 \odot 250 \odot No
I I_a I_d N N_a N_b N_c N_d i i_a i_d	35.44 27.24 16.75 16.48 13.24 7.41	35.44 27.24 16.75 13.98 11.49 6.84			80.63 66.67 44.02 52.36 39.42 35.91 29.40 24.18 18.62 16.69 12.82
$T_{g/w}$ T_s ψ ϵ El, Az	31.0 28.4 20.9 missing	28.0 26.7 17.1 missing			53.2 51.3 0.6 missing
REMARKS: MET SAT 1 - NO NORMAL INCOMING DATA DUE TO CLOUDS					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

SATELLITE IDENTIFICATION DMSP 9415

TIME 1151 (Local) 1751 (GMT)

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbol^c); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
 Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
 Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
 (Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%)
 ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 18 August 1977

RADIOSONDE: (0800MDT) TTAA 68141 72HMS 99880 21639 00000 00123 /////
 /////< 85560 23059 14515 70229 12257 22506 50579 05307 32002 40768 15969
 10002 30979 297// 13518 25106 399// 13029 20254 517// 13032 15435 667//
 12531 88999 77195 13533 41610 0

TTBB 6814/ 72HMS 00880 21639 11861 23459 22833 24061 33700 12257 44605
 04848 55555 00917 66500 05307 77451 11102 88421 14333 99419 15760 11400
 15969 22386 17164 33355 21170 44335 24160 53300 29762 66258 38562 77150
 667// 88127 711// 99123
 711// 51515 10190 10675 SUPER 42-42

TTDD 6814 72 HMS 51515 10150

ROCKETSONDE: (1100 MDT) UNUS 1 KWSO 191754
 RRXX 18170 72269 81010 13101 26550 08016 27546 08016 30545 08018 32541
 09024 35532 09020 36528 10017 37528 12013 38532 09010 40530 06031 42520
 09034 43514 09034 45514 11031 46512 09028 47511 08034 48509 09047 49510
 11050 50515 10039 52519 10051 53520 10057 55518 12053 56521 13041 57524
 11034 58521 09046 59518 09049 60514 10034 61517 14010 64531 26016 65///
 27014 66/// 27008 67/// 01002

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 24 August 1977

TIME 1147 (Local) 1747 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T^a T_{dp}^s W_d W_s C T_{a25}^M T_{dp25}				28.0 16.7 CALM 25.99 250 - ① Yes	
I_a I_d N N_a N_b N_c N_d i i_a i_d				96.30 77.23 37.88 88.89 65.66 59.80 48.89 40.40 18.14 17.15 13.06	
$T_{g/w}$ T_s ψ ϵ El, Az				59.0 55.0 Missing 69.0 174.5	
REMARKS: METSAT I - NOT OPERATED THIS DAY METSAT II - NOT OPERATED THIS RUN					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radian Flux: Global Incoming: $I_a = \text{WG280}, I_d = \text{GG495}, I_s = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_d = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%)
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 24 August 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T_a T_{dp} W_d, W_s P C T_{a25} T_{dp25}			33.0 missing missing missing 120-① No	28.0 17.4 CALM 25.99 65-① Yes	
I I_a I_d N N_a N_b N_c N_d i i_a i_d			93.03 missing 47.33 75.40 46.65 43.42 33.72 28.41 6.23 4.14 3.91	93.69 72.41 42.25 90.51 67.88 60.00 49.29 41.21 19.50 15.13 11.45	
$T_{g/w}$ T_s Ψ ϵ E_l, A_z			63.7 66.2 61.3 135.6	61.0 56.1 missing 62.0 133.7	
REMARKS: METSAT I - NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.); Wind Speed (m/s); P = Station Pressure (hPa); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_d = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%); ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 24 August 1977

RADIOSONDE: (1000 MDT) TTAA 74161 72HMS 99876 25464 18005 /////
85530 25264 18010 70212 14862 13001 50595 06360 26516 40767 15163 26514
30978 30764 29019 25105 411// 26520 20253 521// 26027 15433 647// 20523
10675 745// 31012 88999 77186 26531 40711

TTBB 7416/ 72HMS 00876 25464 11870 24862 22850 25264 33794 23066 44609
05258 55590 03061 66524 04356 77500 06360 88491 06770 99400 15163 11341
23569 22274 35566 33163 629// 44115 737// 55108 703// 66100 745//

ROCKETSONDE: (1329 MDT) RRXX 24193 72269 81010 63101

26548 10019 30545 09018 31543 09025 32527 10026 35536 09023 38532 10022
39530 10027 40524 10030 41518 10025 45514 09026 47514 11030 49507 11029
50511 12031 53515 08035 55515 12031 53515 08035 55515 10034 56513 11029
57515 11024 58519 11035 59524 12047 60528 11039 61533 07022 62539 04032
63540 07034 64541 10032 65*** 08021 66*** 06026 67*** 06030 69*** 05002

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 25 August 1977

TIME: 1212 (Local) 1812 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	30.1	30.1		30.3	
T _{dp}	15.1	15.1		16.8	
W _d	CALM	CALM		CALM	
P	25.88	25.88		25.91	
C	60-0	60-0		250-0	
T _{a25}	YES	YES		YES	
T _{dp25}					
I	90.41	90.41		95.10	
I _a	70.76	70.76		71.79	
I _d	42.21	42.21		39.23	
N	91.57	91.57		85.86	
N _a	64.35	64.35		65.45	
N _b	60.29	60.29		60.20	
N _c	49.11	49.11		49.70	
N _d	43.36	43.36		40.40	
i	45.45	40.81		17.42	
i _a	35.24	35.52		15.48	
i _d	21.76	21.70		11.12	
T _{g/w}	29.2	30.0		39.2	
T _s	34.0	35.0		35.9	
ψ _s	20.5	19.0		2.7	
ε					
El, Az	missing	missing		missing	
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

DATE: 25 August 1977

RADIOSONDE (0800 MDT) TTAA 75141 72HMS 99876 21856 00000 00085 ///// ///// 85518
22657 17003 70193 13258 26509 50593 05960 25010 40765 15157 25018 30976 30157
23020 25103 40757 24022 20251 515// 25035 15432 655// 27041 88999 77429 26043
402// 0

TTBB 7514/ 72HMS 00876 21856 11850 22657 22837 23659 33700 13258 44654 09457
55645 17848 66587 03060 77552 00560 88541 01557 99516 04162 11500 05960 22458
08162 33435 10962 44413 13550 55400 15157 66362 20542 77300 30157 88250 40757
99238 43357 11200 515// 22150 655// 33139 689// 51515 SUPER 65-64 0

ROCKETSONDE (1011 MDT) RRXX 25161 72269 80100 01201 21500 30501 38501 41501
50504 55/// 57/// 11010 10023 10022 09035 10041 11021 06039 25500 35501 40501
40502 53505 56/// 09013 09026 08028 08022 09037 08021

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 26 August 1977 TIME 0946 (Local) 1546 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	28.1	28.1			30.0
T _{dp}	14.9	14.9			calm
W _s	120 3.6	120 3.6			calm
P	25.79	25.79			25.90
C	220 - ①	220 - ①			170 ① 250 ①
M	No	No			yes
T _{a25}					
T _{dp25}					
I	56.03	56.03			57.34
I _a	43.93	43.93			43.90
I _d	29.07	29.07			26.74
N	77.12	77.12			77.58
N _a	50.95	50.95			58.99
N _b	44.37	44.37			55.15
N _c	31.23	31.23			46.87
N _d	25.41	25.41			39.60
i	36.17	29.87			missing
i _a	28.75	27.16			12.82
i _d	17.84	17.52			10.52
T _{g/w}	32.0	31.1			39.2
T _s	26.0	27.8			34.0
ψ	18.8	19.1			1.3
c					
El, Az	39.0 103.7	3.90 103.7			39.0 103.2

REMARKS:

MET SAT II NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 26 August 1977

TIME 1016 (Local) 1616 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	29.1	29.1			31.0
T _{dp}	14.2	14.2			13.1
W _s	100 3.1	160 3.1			calm
P	25.80	25.80			25.90
C	220 - ☉	320 - ☉			180 ☉ 250 - ☉
M	No	No			yes
T _{a25}					
T _{dp25}					
I	69.43	69.43			69.75
I _a	53.96	53.96			52.72
I _d	35.14	35.14			31.43
N	82.05	82.05			84.44
N _a	57.40	57.40			64.44
N _b	53.35	53.35			60.00
N _c	43.49	43.49			48.48
N _d	39.76	39.76			41.82
i	37.71	33.90			missing
i _a	29.58	29.40			14.63
i _d	18.41	18.13			11.12
T _{g/w}	34.8	24.5			41.0
T _s	31.5	32.5			36.3
ψ	18.8	19.1			1.3
ε					
El, Az	45.3 108.5	45.3 108.5			45.4 107.9

REMARKS:

MET SAT - II NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W = Wind Direction (degree); W_s = Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG230, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 26 August 1977 TIME 0946 (Local) 1546 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	28.1	28.1			30.0
T_{dp}	14.9	14.9			calm
W_s	120 3.6	120 3.6			calm
P	25.79	25.79			25.90
C	220 - (D)	220 - (D)			170 (D) 250 (D)
M	No	No			yes
T_{a25}					
T_{dp25}					
I	56.03	56.03			57.34
I_a	43.93	43.93			43.90
I_d	29.07	29.07			26.74
N	77.12	77.12			77.58
N_a	50.95	50.95			58.99
N_b	44.37	44.37			55.15
N_c	31.23	31.23			46.87
N_d	25.41	25.41			39.60
i	36.17	29.87			missing
i_a	28.75	27.16			12.82
i_d	17.84	17.52			10.52
$T_{g/w}$	32.0	31.1			39.2
T_s	26.0	27.8			34.0
ψ	18.8	19.1			1.3
ϵ					
El, Az	39.0 103.7	3.90 103.7			39.0 103.2

REMARKS:

MET SAT II NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 9415

DATE OF OBSERVATION 26 August 1977 TIME 1436 (Local) 2036 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	34.5	34.5			25.1
T _{dp}	11.9	11.9			19.1
W _s	180 6.7 68.9	180 6.7G 8.9			calm
P	25.69	25.69			25.9
C	65 ① 180 ① 220 ①	65 ① 180 ① 220 ①			60 ① E170 ①
M	No	No			yes
T _{a25}					
T _{dp25}					
I	87.45	87.45			29.38
I _a	69.06	69.06			22.87
I _d	42.71	42.71			13.57
N	88.12	88.12			
N _a	59.92	59.92			
N _b	55.88	55.88			
N _c	45.13	45.13			
N _d	41.21	41.21			
i	48.60	43.64			missing
i _a	37.85	38.06			6.29
i _d	23.35	23.36			4.72
T _{g/w}	40.2	41.2			40.0
T _s	40.4	43.4			39.0
ψ	18.3	19.1			1.3
c					
El, Az	59.9 227.8	59.9 227.8			60.3 228.3

REMARKS:

METSAT II - NOT OPERATED THIS DAY

METSAT IV - NO NORMAL INCOMING DATA DUE TO CLOUDS

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (direction and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

g/w = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
= Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 26 August 1977

RADIOSONDE: (0800 MDT) TTAA 76141 72HMS 99873 24067 17010 00033 // // // //
 85493 24462 17011 70162 13059 25012 50590 05161 23012 40762 15762 23519 30973
 30564 24531 25100 40158 22031 20248 519// 24537 15429 641// 25022 10670 725//
 20019 88117 751// 25019 77173 24539 40516

TTBB 7614/ 72HMS 00873 24067 11863 25663 22767 20064 33700 13059 44629 07258
 55591 02856 66574 02262 77514 04157 88500 05161 99472 08559 11462 08967 22400
 15762 33389 17557 44367 19565 55327 25367 66300 30564 77273 34958 88241 41959

TTCC 76142 72HMS 70885 601// 11006 50097.571// 16013 30426 497// 16523 20687
 481// 17020 88999 77999

TTDD 7614/ 72HMS 11918 709// 22700 601// 33300 497// 44144 465//

ROCKETSONDE: (1230MDT) RRXX 26183 72269 81010 3101
 25553 11017 30545 09123 35538 04019 33520 09021 40529 08025 45508 09035 50512
 10030 51514 10037 52510 11442 53505 13041 55509 14026 58514 13010 59516 28003
 60519 01007 62525 20011 63529 21007 65537 10019 66541 11019 67*** 10012

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 29 August 1977 TIME 1002 (Local) 1602 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	25.0	25.0			28.8
T _{dp}	14.6	14.6			16.5
W _s	340 4.5	340 4.5			120 3.6
P	25.98	25.98			26.01
C	○	○			65 ⊕
M	No	No			No
T _{a25}					
T _{dp25}					
I	58.18	58.18			62.02
I _a	56.15	56.15			49.74
I _d	31.84	31.84			28.41
N	79.90	79.90			82.22
N _a	65.37	65.37			61.01
N _b	51.83	51.83			54.14
N _c	43.36	43.36			45.05
N _d	38.56	38.56			39.80
i	33.24	30.61			missing
i _a	25.96	26.57			14.51
i _d	16.24	16.31			11.37
T _{g/w}	41.0	33.0			37.4
T _s	38.5	27.6			26.0
ψ	20.9	19.7			1.0
ε					
El, Az	41.8 107.9	41.8 107.9			41.9 107.4

REMARKS:

MET SAT II - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%) = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 29 August 1977

TIME 1201 (Local) 1801 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	30.1	30.1			31.8
T _{dp}	15.5	15.5			15.3
W _s	calm	calm			100 5.1
P	25.98	25.98			26.01
C	60 ☉	60 ☉			E70 ☉ 120 ☉
M	No	No			No
T _{a25}					
T _{dp25}					
i	87.43	87.43			88.03
i _a	68.50	68.50			69.74
i _d	44.42	44.42			45.89
N	85.32	85.32			84.65
N _a	67.91	67.91			65.05
N _b	57.81	57.81			58.18
N _c	45.82	45.82			48.69
N _d	40.49	40.49			41.41
i	44.69	40.38			missing
i _a	34.34	35.01			21.76
i _d	21.16	21.50			16.81
T _{z/w}	38.1	38.3			46.8
T _s	39.3	40.3			43.1
ψ	20.9	19.7			1.0
c					
El, Az	62.4 143.4	62.4 143.4			62.8 142.6

REMARKS:

MET SAT II- NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (defined by Wind Speed (m/s)); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: i = WG280, i_a = GG495, i_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{z/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 29 August 1977

RADIOSONDE: (0700MDT)TTAA 79131 72HMS 99876 17060 00000 00099 // // // // //
 85524 22259 16002 70186 11657 20006 50591 03165 26005 40763 15564 28512
 30973 31962 38519 25098 421// 26515 20245 539// 25519 15424 659// 24520
 539// 25519 15424 659// 24520 10665 703// 25014 88119 733// 27015 77999

TTBB 7913/ 72HMS 00876 17060 11866 23460 22850 22259 33757 17059 44700
 11657 55592 00432666584 00658 77500 00958 88552 00165 99544 00962 11537
 00165 22500 03165 33432 12963 44400 15564 55362 22563 66300 31962 77268
 38561 88250 421// 99200 539// 11170 619// 22150 659// 33133 713// 44119
 733// 55106 68511 66100 703// 0

TTCC 79153 72HMS 70882 619// 06007 50003 585// 08019 88999 77388 08023
 40504 0

TTDD 7913/ 72HMS 11949 681// 22884 637// 33833 655// 44750 651// 55700
 619// 66618 585// 77500 585// 88388 545// 99321 501// 51515 10190 30420 0

ROCKETSONDE: (1145MDT) RRXX 29175 72269 81010 13101 23557 11011 25552
 09012 30544 09021 33538 11018 35540 10016 37528 07017 38525 07021 40***
 10027 42*** 09021 45*** 09026 50*** 09033 51*** 10039 52*** 13038 53***
 16032 54*** 19013 55*** 02012 56*** 05023 57***06023 60*** 20018 61***
 24002 42*** 06012 63*** 09017 64*** 08011 65*** 36009 66*** 35008 67***
 00010 68***34019

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 30 August 1977

TIME 1216 (Local) 1816 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	29.6	29.6			27.1
T _{dp}	12.6	12.6			15.3
W _s	140 3.6	140 3.6			calm
P	25.85	25.85			26.02
C	○	○			160-⊙
M	No	No			No
T _{a25}					
T _{dp25}					
I	89.89	89.89			87.49
I _a	70.43	70.43			73.13
I _d	45.05	45.05			43.81
N	87.99	87.99			90.30
N _a	62.96	62.96			66.67
N _b	55.38	55.38			59.19
N _c	46.53	46.53			50.10
N _d	40.83	40.83			43.23
i	47.91	44.39			19.59
i _a	37.33	38.96			19.47
i _d	23.35	23.87			14.63
T _{g/w}	40.5	40.3			50.1
T _s	42.8	40.6			50.0
ψ	21.3	18.8			0.8
ε					
El, Az	missing	missing			missing

REMARKS:

METSAT II - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = PG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 30 August 1977

RADIOSONDE: (0800MDT) TTAA 80142 72HMS 99878 23061 15005 // // 85539
21458 16012 70199 12647 18004 50594 04365 22509 40766 15570 27013 30975 31767
26021 25101 411// 26034 20249 517// 26540 88999 77406 27048 411// 0

TTBB 8014/ 72HMS 00878 23061 11850 21458 22700 12647 33613 04030 44530 03157
55522 02558 66514 02559 77500 04365 88489 05164 99400 15570 11300 31767 22291
33567 33250 411// 44200 517// 55156 639// 51515 10190 15430 0

TTDD 8014/ 72HMS 51515 10150 0

NO ROCKETSONDE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 31 August 1977 TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	32.0	32.0			33.8
T _{dp}	18.1	18.1			13.5
W _s	160 1.8	160 1.8			calm
P	25.85	25.85			25.90
C	60 ① 200 ①	60 ① 200 ①			70 ① 250 ①
M	No	No			No
T _{a25}					
T _{dp25}					
I	87.21	87.21			96.84
I _a	60.19	60.19			77.54
I _d	37.81	37.81			43.70
N	94.24	94.24			93.54
N _a	63.54	63.54			68.08
N _b	57.37	57.37			63.23
N _c	48.66	48.66			51.52
N _d	42.49	42.49			43.64
i	36.21	33.37			20.76
i _a	28.75	27.16			19.23
i _d	15.63	15.21			14.15
T _{g/w}	38.0	44.0			45.0
T _s	41.2	46.7			45.0
ψ	20.0	18.9			0.5
ε					
El, Az	66.1 176.6	66.1 176.6			66.6 176.3

REMARKS:

METSAT II - NOT OPERATED THIS RUN

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
= Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 7218

DATE OF OBSERVATION 31 August 1977

TIME 1443 (Local) 2043 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	29.9	29.9	missing		34.2
T _{dp}	15.9	15.9	missing		11.4
W _s	005 1.8	005 1.8	180 4.0		085 1.3
P	25.85	25.85	missing		25.85
C	65 ☉	65 ☉	E65 ☉		E70 ☉ 250 ☉
M	No	No			No
T _{a25}					
T _{dp25}					
I	83.19	83.19	88.07		91.85
I _a	66.21	66.21	missing		75.90
I _d	41.75	41.75	45.41		43.91
N	94.24	94.24			93.74
N _a	67.56	67.56			71.31
N _b	58.31	58.31			63.84
N _c	49.73	49.73			52.73
N _d	43.30	43.30			43.23
i	45.11	40.08	16.09		21.44
i _a	34.64	35.22	9.44		20.56
i _d	21.04	21.35	6.59		16.08
T _{g/w}	52.9	40.2	missing		50.5
T _s	41.7	45.6	missing		47.7
ψ	20.0	18.9			0.5
ε					
El, Az	57.2 228.8	57.2 228.8	57.2 228.8	56.7 228.3	57.6 229.2

REMARKS:

METSAT II - NO NORMAL INCOMING DATA

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%) = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 31 August 1977

RADIOSONDE: (1200 MDT) UNUS 1 KWSO 011705

RRXX 31181 72269 81010 63101 25552 10009 30545 09014 35536 09017 40519
09016 45511 09032 46505 10029 47508 13030 48512 12032 50512 09026 51515
09033 52513 10035 53510 10038 54506 11033 55510 15017 56514 15007 58519
15021 59520 17024 60521 21018

61524 28011 62527 01005 63531 10016 64535 12017 65539 25002 66546 32018
67550 33021 69555 07005 70559 25010 72/// 31039 73/// 31043 74/// 32028

ROCKETSONDE: (0800MDT) TTAA 81141 72HMS 99876 19460 00000 00093 /////

///// 85518 23060 19004 70174 10031 33004 50589 07363 16008 40760 17561
24008 30970 31568 25023 25095 417// 25029 20244 527// 25045 15424 66311
27033 10665 701// 26510 88999 77182 25047 41010

TTBB 8114/ 72HMS 00876 19460 11857 23860 22850 23060 33787 18058 44700
10031 55691 09223 66661 08658 77522 05556 88514 05963 99500 07364 11464
10167 22456 11557 33441 12573 44418 15764 55417 15959 66400 17561 77395
18158 88388 18770 99327 27562 11300 31568 22295 325// 33250 417// 44200
527// 55176 595// 66150 663// 77132 709// 88122 70511 99116 729// 11104
731// 22100 701// 51515 SUPER 86-85 46-46 0

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 7 September 1977 TIME 1034 (Local) 1634 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	24.1	24.1			27.7
T _{dp}	10.9	10.9			10.9
W _s	calm	calm			calm
P	26.05	26.05			26.12
C	○	○			○
M	No	No			No
T _{a25}					
T _{dp25}					
I	71.99	71.99			69.99
I _a	56.39	56.39			55.18
I _d	38.02	38.02			33.61
N	90.48	90.48			86.87
N _a	66.49	66.49			65.86
N _b	60.32	60.32			60.40
N _c	50.27	50.27			51.11
N _d	44.10	44.10			42.02
i	34.50	33.37			16.10
i _a	28.06	30.30			15.36
i _d	17.68	19.64			12.21
T _{g/w}	31.1	32.8			43.5
T _s	26.1	27.0			37.0
ψ	10.3	25.7			0.7
ε					
El, Az	missing missing	missing missing			missing missing

REMARKS:

METSAT II- NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Wind Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 7 September 1977

TIME 1202 (Local) 1802 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	29.5	29.5			30.0
T _{dpw}	9.4	9.4			10.1
P	170 05	170 05			275 2.1
C	26.04	26.04			26.11
M	○	○			70 ⊕
T _{a25}	No	No			No
T _{dp25}					
I	89.16	89.16			86.42
I _a	70.22	70.22			69.95
I _d	45.37	45.37			42.14
N	95.44	95.44			91.52
N ^a	69.03	69.03			68.69
N ^b	60.59	60.59			63.03
N ^c	51.47	51.47			52.53
N ^d	45.58	45.58			43.64
i	42.46	31.31			19.48
i _a	34.95	37.16			18.26
i _d	21.48	23.46			14.27
T _{g/w}	37.2	42.3			43.1
T _s	36.0	39.2			42.3
ψ	10.3	25.7			0.7
e					
El, Az	missing	missing	missing	missing	missing

REMARKS: METSAT II - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
e = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 7 September 1977 TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	30.9	30.9			32.0
T _{dp}	9.0	9.0			9.2
W _s	200 1.8	200 1.8			calm
P	26.01	26.01			26.08
C	○	○			70 ○ 250 - ○
M	No	No			No
T _{a25}					
T _{dp25}					
I	93.54	93.54			90.01
I _a	74.76	74.76			72.82
I _d	48.35	48.35			44.22
N	98.26	98.26			90.91
N _a	70.64	70.64			68.08
N _b	62.06	62.06			62.42
N _c	52.82	52.82			51.31
N _d	46.65	46.65			42.63
i	46.93	44.17			20.13
i _a	38.76	39.85			18.98
i _d	24.08	25.48			14.87
T _{g/w}	41.1	42.3			49.0
T _s	39.2	43.0			46.4
ψ	10.3	25.7			0.7
ε					
El, Az	missing missing	missing missing			missing missing

REMARKS: METSAT II - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%) = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 7 September 1977

TIME 1414 (Local) 2014 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	32.1	32.1			31.5
T _{dp}	8.6	8.6			7.1
W _s	calm	calm			calm
P	26.01	26.01			26.06
C	○	○			70 ⊕ 250 ⊕
M	No	No			No
T _{a25}					
T _{dp25}					
I	90.38	90.38			89.14
I _a	71.81	71.81			70.05
I _d	46.22	46.22			43.70
N	97.86	97.86			93.13
N _a	70.04	70.64			70.10
N _b	62.74	62.74			64.44
N _c	52.95	52.95			52.93
N _d	46.65	46.05			44.44
i	45.95	42.48			19.37
i _a	37.84	38.41			18.02
i _d	23.53	24.37			14.15
T _{g/w}	41.2	42.0			51.7
T _s	40.3	42.2			46.5
ψ	10.3	25.7			0.7
ε					
El, Az	missing missing	missing missing			missing missing

REMARKS: METSAT II- NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 7 September 1977

RADIOSONDE: (0700MDT) TTAA 57131 72HMS 99881 12661 00000 00146 /////
 85571 21862 21004 70221 09661 01009 50593 07769 05025 40762 18967 04018
 30969 35559 01021 25094 439// 34515 20241 519// 33519 15423 631// 00516
 10669 681// 35514 88126 675// 35021 77999 Ø

TTBB 5713/ 72HMS 00881 12661 11871 21461 22865 22862 33731 12058 44649
 05868 55575 00368 66557 01169 77400 18967 88394 19967 99319 32558 11275
 40960 22]26 675// 33100 681// Ø

TTCC 57132 72HMS70883 643// 08015 50094 583// 050// 30420 515// 08021
 20686 471// 07029 88999 77148 09035 403// Ø

TTDD 57131 72HMS 11945 709// 22700 643// 33631 599// 44500 583// 55269
 497// 66243 50511 77213 467// 88128 435// Ø

ROCKETSONDE: (1210MDT) RRXX 07181 72269 81010 63101 26*** 10012 27548
 10014 30544 10013 35535 10023 37528 12020 39526 09013 40525 07018 43515
 11024 45510 12018 46509 10027 47506 11032 48507 14015 49511 11004 50514
 12014 52515 13006 55519 13011 56517 15018 57514 17013 58513 24003 60520
 21005 61524 17004 62529 16006 63535 18012 65534 24034 67540 26035 68542
 28037 70553 30055 72*** 31074 73// 32069 74// 24054

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 8 September 1977

TIME 1021 (Local) 1621 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	24.9	24.9	23.5		28.3
T _{dp}	12.2	12.2	12.6		11.9
W _d	180	180	210		065
P _s	2.7	2.7	4.0		4.5
C	25.98	25.98	25.61		26.10
T _M	○	○	○		○
a25	No	No	No		No
T _{dp25}					
I	67.60	67.60	64.22		66.57
I _a	52.59	52.59	54.56		52.41
I _d	35.14	35.15	32.59		32.37
N			85.97		83.64
N _a			67.00		65.25
N _b			62.58		57.78
N _c			51.83		48.48
N _d			44.88		40.60
i	42.46	missing	5.90		15.56
i _a	19.90	missing	4.14		15.60
i _d	19.85	missing	3.35		12.58
T _{g/w}	29.1	missing	29.1		38.0
T _s	24.2	missing	36.4		31.8
ψ	12.6	28.0			0.3
ε					
El, Az	missing missing	missing missing	missing missing		missing missing
REMARKS:					
METSAT I-NO NORMAL INCOMING DATA THIS RUN					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 8 September 1977

TIME 1226 (Local) 1826 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	30.0	30.0	30.4		32.0
T _{dp}	10.3	10.3	10.3		10.0
W _s	180 2.7	180 2.7	170 2.7		060 4.1
P	25.98	25.98	25.57		26.10
C	○	○	○		○
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	91.56	91.56	86.15		92.34
I _a	72.32	72.32	71.33		72.00
I _d	46.26	46.26	45.31		44.54
N	92.48	92.48	92.28		89.49
N _a	66.00	66.60	69.28		67.68
N _b	59.08	59.08	64.00		61.62
N _c	49.65	49.85	53.10		50.30
N _d	44.37	44.37	45.01		41.82
i	45.91	43.79	6.95		20.46
i _a	37.96	39.07	4.61		19.83
i _d	23.73	24.40	3.75		15.84
T _{g/w}	48.2	38.0	38.0		48.2
T _s	38.0	30.9			49.9
ψ	12.6	28.0			0.3
e					
El, Az	missing missing	missing missing	missing missing		missing missing
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (de Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 8 September 1977

RADIOSONDE: (1000MDT) TTAA 58161 72HMS 99880 26265 17010 00130 ///// ///// 85566
 23664 16511 70227 11460 33508 50596 04570 04510 40768 19167 04513 30974 34765 05513
 25099 427// 33008 20247 513// 30513 15429 623// 30509 10676 681// 04003 88118 673//
 35503 77604 05022 41414

TTBB 5816/ 72HMS 00880 26265 11680 09459 22608 06070 33540 00072 4440019167 55342
 29166 66300 34765 77150 623// 88118 673// 99100 681//

TTCC 58167 72HMS 70892 625// 09011 88999 77999

TTDD 5816/ 72HMS 11943 687// 22538 579// 51515 10190 50103

ROCKETSONDE: (1200MDT) RRXX 08180 72269 81010 13101 25553 10010 30542 09017 35538
 11022 36531 12022 40523 08015 42517 09017 43512 11016 44508 11010 45510 11006 46512
 12016 47514 11023 48517 10019 50508 07020 51506 10014 52505 14012 54509 14026 55511
 15022 56513 22010 58517 32005 60523 23019 62530 25031 65540 28018 67*** 29020

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 13 September 1977

TIME 0944 (Local) 1544 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	20.7	20.7	22.3		25.0
T_{dp}	11.8	11.8	13.5		10.9
d_p	340 5.4	340 5.4	040 0.4		calm
C	25.91	25.91	missing		26.01
T_{a25}	○	○	○		○
T_{dp25}	yes	yes	yes		yes
I	56.39	56.39	55.32		54.70
I_a	43.55	43.55	44.89		43.92
I_d	29.02	29.02	26.44		27.16
N	87.04	87.04	87.23		87.68
N_a	63.62	63.62	68.27		67.68
N_b	55.94	55.94	61.95		61.62
N_c	47.72	47.72	50.57		52.12
N_d	42.18	42.18	44.25		44.44
i	26.62	27.35	2.32		15.43
i_a	22.62	24.66	1.65		13.30
i_d	13.69	15.65	1.32		10.54
$T_{g/w}$	23.0	25.4	25.6		39.2
T_s	19.9	20.8	25.0		33.0
ψ	8.7	8.5			0.6
ϵ					
El, Az	35.9 111.1	35.9 111.1	35.8 111.7		36.0 110.7

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d , W_s = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25} , T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 13 September 1977

RADIOSONDE: (0800MDT) T1AA 63141 72HMS 99875 17037 03001 00096 ////
 /// 85512 18461 35009 70145 07460 33517 50582 09968 28027 40750 22156
 27035 30950 38559 26034 25073 467// 26554 20218 551// 26046 15401 577//
 25032 10651 647// 25521 88206 563// 26552 77228

TTBB 6314/ 72HMS 00875 17037 11862 19060 22582 03762 33548 06558 44530
 08162 55515 08957 66492 10769 77400 22150 88389 22562 99300 38559 11281
 42757 22250 467// 33215 559// 44206 563// 55197 537// 66127 611// 77113
 671// 88108 645// 99100 647// 0/

TTCC 6314 72HMS 88999 77999 0

TTDD 6314/ 72HMS 11863 647// 22798 617// 33768 63// 51515 10190 70870 0

ROCKETSONDE: (1000MDT) RRXX 13160 72269 81010 13101
 25550 09011 30546 10013 32540 1201135539 06010 37529 12010 39530 11005
 40523 04005 42520 04019 43518 06021 45511 12013 46507 15006 48508 02011
 50505 08024 51507 12032 52509 15019 53513 31003 54510 04011 55518 11013
 56517 21008 57524 22013 60526 28016 61528 31017 62525 32009 65534 25017
 66// 23013

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 14 September 1977 TIME 0952 (local) 1552 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	21.2	21.2	21.6		
T _{dp}	13.2	13.2	9.5		
W _s	070 1.8	070 1.3	200 4.0		
P	25.95	25.95	25.55		
C	○	○	○		
M	yes	yes	yes		
T _{a25}					
T _{dp25}					
I	58.34	58.34	54.31		
I _a	45.41	45.41	46.11		
I _d	30.40	30.46	27.45		
N	87.27	87.27	83.44		
N _a	63.67	63.67	67.04		
N _b	56.30	56.30	62.58		
N _c	48.26	48.26	51.33		
N _d	42.23	42.23	45.51		
i	28.49	28.60	4.95		
i _a	24.02	25.37	2.60		
i _d	15.18	16.52	2.13		
T _{g/w}	34.0	30.3	missing		
T _s	31.1	28.2	missing		
ψ	11.3	8.3			
c					
E1, Az	37.3 113.1	37.3 113.3	37.1 113.7		

REMARKS:

METSAT IV - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
= Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 14 September 1977

TIME 1222 (Local) 1822 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	25.0	25.0	26.9		
T _{dp}	12.8	12.8	17.2		
W _s	130 2.7	130 2.7	200 3.6		
P	25.93	25.93	25.52		
C	○	○	80 ⊕		
T _{a25}	yes	yes	yes		
T _{dp25}					
I	87.70	87.70	84.68		
I _a	69.27	69.27	70.00		
I _d	45.05	45.05	44.80		
N	94.37	94.37	97.98		
N _a	67.56	67.56	91.43		
N _b	60.59	60.59	67.04		
N _c	50.27	50.27	55.63		
N _d	44.37	44.37	48.04		
i	41.34	42.27	6.85		
i _a	34.12	37.91	4.02		
i _d	21.38	23.87	3.45		
T _{g/w}	37.1	32.0	35.2		
T _s	34.6	30.5	missing		
ψ	11.3	8.3			
E _l , A _z	59.6 160.7	59.6 160.7	59.0 161.3		

REMARKS:

METSAT IV - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W₁, W₂ = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%) = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 14 September 1977

TIME 1229 (Local) 1829 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	25.0	25.0	26.9		
T _{dp}	12.8	12.8	17.2		
d _p W _s	130 2.7	130 2.7	190 1.3		
P	25.93	25.93	25.52		
C	○	○	80 ⊙		
T _{a25}	yes	yes	yes		
T _{dp25}					
I	88.67	88.67	85.50		
I _a	70.22	70.22	70.22		
I _d	45.26	45.26	45.21		
N	94.91	94.91	96.71		
N _a	67.56	67.56	71.43		
N _b	60.72	60.72	66.37		
N _c	50.54	50.54	54.99		
N _d	44.37	44.37	46.78		
i	41.90	43.01	6.64		
i _a	34.64	38.21	3.78		
i _d	21.58	23.97	3.14		
T _{g/w}	37.1	32.0	36.7		
T _s	34.6	30.5	missing		
ψ	11.3	8.3			
ε					
El, Az	60.1 164.1	60.1 164.1	59.4 164.7		

REMARKS:

METSAT IV - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN
DATE OF OBSERVATION 14 September 1977 TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	26.0	26.0	25.9		
T _{dp}	12.2	12.2	13.4		
d _p W _s	180 2.7	180 2.7	180 2.7		
C	25.90 ○	25.90 ○	25.51 ○		
T _{a25}	yes	yes	yes		
T _{dp25}					
I	90.01	90.01	86.97		
I _a	71.28	71.28	70.44		
I _d	45.58	45.58	45.41		
N	95.31	95.31	96.71		
N _a	67.96	67.96	72.69		
N _b	60.46	60.46	67.64		
N _c	50.54	50.46	55.63		
N _d	44.04	44.64	48.04		
i	43.16	43.96	6.85		
i _a	35.77	39.10	3.66		
i _d	22.34	24.47	3.14		
T _{g/w}	37.2	32.0	37.1		
T _s	35.0	30.5	missing		
ψ	11.3	8.3			
ε					
El, Az	61.0 179.7	61.0 179.7	60.3 180.0		

REMARKS:

METSAT IV - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition_s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 14 September 1977

TIME 1345 (Local) 1945 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	27.6	27.6	28.3		
T _{dp}	9.3	9.3	14.3		
W _s	180 2.7	180 2.7	320 2.2		
P	25.90	25.90	25.48		
C	○	○	80 ⊕		
M	yes	yes	yes		
T _{a25}					
T _{dp25}					
I	89.16	89.16	86.01		
I _a	71.17	71.17	70.56		
I _d	45.26	45.26	45.31		
N	96.65	96.65	97.35		
N _a	69.30	69.30	72.06		
N _b	61.80	61.80	66.37		
N _c	51.61	51.61	55.03		
N _d	45.71	45.71	48.04		
i	42.74	44.60	6.74		
i _a	35.36	40.45	3.90		
i _d	22.34	24.97	3.35		
T _{g/w}	400	37.0	38.0		
T _s	38.2	34.6	missing		
ψ	11.3	8.3			
c					
El, Az	59.2 202.1	59.2 201.9	58.5 201.9		

REMARKS:

METSAT IV - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
= Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 14 September 1977

RADIOSONDE: (0800 MDT)

TTCC 64147 72HMS 70876 645// 33504 88999 77999

TTDD 6414/ 72HMS 11808 661// 22700 645// 33649 607// 44589 595// 51515 10190
50086

TTAA 64141 72HMS 99878 14857 00000 00131 // // 85534 16059 19004 70170
06650 28010 50585 09966 31523 40753 22160 31541 30958 30 9 32034 25080 471//
3203720226 545// 31530 15408 583// 31027 10658 659// 32 98124 635// 31529
77353 32048 41013

TTBP 64141 72HMS 00878 14857 11864 16659 22789 13858 33700 06650 44647 02437
55565 05762 66549 07362 77524 07165 88449 15365 99400 2216011375 25948 22343
30560 33280 42158 44250 471// 55228 489// 66183 569// 77150 583// 88124 635//
99101 661// 11100 659//

ROCKETSONDE: (1230 MDT)

RRXX 14183 72269 81010 63101 24549 11008 25548 11012 28543 11018 30539 10011
35533 09013 40519 11012 45505 14010 50508 16015 51504 12006 52502 05017 54504
17025 55505 19017 56507 17007 58512 20008 60519 23025 62527 25017 63528 25028
65530 26022 66531 25019 67534 30010 68537 34020 70/// 34053 71/// 35048 72///
34032

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 21 September 1977

TIME 0931 (Local) 1531 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	21.7	21.7	20.4		26.8
T _{dp}	7.9	7.9	8.7		9.3
W _s	110 13.4	110 13.4	calm		calm
P	25.99	25.99	25.52		26.01
C	160 (1) 220- (1)	160 (1) 220- (1)	120 (1)		250- (1)
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	50.06	50.06	46.79		55.93
I _a	38.86	38.86	34.67		38.46
I _d	26.41	26.41	19.88		24.77
N	93.30	93.30	80.28		81.62
N _a	68.23	68.23	61.31		65.05
N _b	62.87	62.87	57.52		56.57
N _c	51.74	51.74	46.14		48.48
N _d	46.38	46.38	41.09		40.40
i	29.19	missing	3.79		15.99
i _a	23.90	missing	2.36		12.33
i _d	16.05	missing	2.13		9.43
T _{g/w}	27.8	missing	26.3		missing
T _s	19.9	missing	missing		missing
ψ	19.4	18.4			1.1
ε					
El, Az	32.1 112.1	32.1 112.1	31.9 112.7		32.1 112.3

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 21 September 1977

TIME 1035 (Local) 1635 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	27.1	27.1	25.4		28.1
T _{dp}	6.8	6.8	6.3		8.7
W _s	100 4.5	100 4.5	120 1.3		calm
P	26.00	26.00	25.52		26.00
C	160 (1) 220 (1)	160 (1) 220 (1)	120 (1)		210- (1)
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	68.45	68.45	52.48		88.25
I _a	53.54	53.54	40.56		65.56
I _d	36.53	36.53	25.33		31.42
N	98.66	98.66	90.39		90.91
N _a	70.78	70.78	67.00		65.05
N _b	64.88	64.88	61.95		60.40
N _c	53.35	53.35	50.57		52.73
N _d	47.86	47.86	42.98		43.03
i	37.01	missing	5.27		22.39
i _a	29.56	missing	2.84		17.05
i _d	19.74	missing	2.33		12.21
T _{g/w}	38.7	missing	30.1		missing
T _s	18.4	missing	missing		missing
ψ	19.4	18.4	missing		1.1
ε					
El, Az	43.8 126.0	43.8 126.0	43.5 126.6		44.0 125.5

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%) = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 21 September 1977

TIME 1200 (Local) 1800 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	29.0	29.0	29.8		30.2
T _{dp}	7.6	7.6	10.9		9.3
d _p	070 9.0	070 9.0	210 2.2		calm
P	25.99	25.99	25.50		25.98
C	170 ☉	170 ☉	120 ☉		210-1
M	No	No	No		No
T _{a25}					
T _{dp25}					
i	84.77	84.77	82.11		98.37
i _a	66.95	66.95	68.78		67.69
i _d	43.77	43.77	42.58		42.56
N	101.07	101.07	98.61		96.36
N _a	71.98	71.98	72.69		71.72
N _b	66.22	66.22	67.00		63.64
N _c	54.16	54.16	53.73		53.54
N _d	48.53	48.53	46.14		45.66
i	45.67	missing	7.27		25.59
i _a	36.18	missing	5.32		19.59
i _d	23.54	missing	4.36		15.36
T _{g/w}	36.0	38.8	41.9		missing
T _s	31.9	35.2	missing		missing
ψ	19.4	18.4	missing		1.1
e					
El, Az	55.5 153.8	55.5 153.3	54.0 154.5		55.8 153.4

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
e = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 21 September 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	29.3	29.3	31.3		31.0
T_{dp}	7.4	7.4	10.5		13.1
d_p	050 13.4	050 13.4	220 6.7		calm
P	25.96	25.96	25.48		29.98
C	170 (1)210- (1)	170 (1)210- (1)	120 (1)		210- (1)
M	No	No	No		No
T_{a25}					
T_{dp25}					
I	89.04	89.04	87.34		103.59
I_a	70.58	70.58	71.33		70.77
I_d	45.48	45.58	45.31		44.85
N	101.61	101.61	101.14		96.77
N_a	72.12	72.12	73.96		72.12
N_b	66.22	66.22	67.64		64.24
N_c	54.16	54.16	55.63		53.33
N_d	48.53	48.53	48.04		44.44
i	48.88	missing	7.38		26.70
i_a	38.77	missing	5.67		20.19
i_d	25.49	missing	4.78		15.96
$T_{g/w}$	37.6	41.5	43.9		49.0
T_s	36.7	45.8	missing		missing
ψ	19.4	18.4	missing		1.1
ϵ					
El, Az	58.3 181.0	58.3 181.0	57.6 181.2		58.7 187.3

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 21 September 1977

RADIOSONDE: (0800 MDT) TTAA 71141 72HMS 99876 18664 16002 00095 ///// ///// 85519
 22867 21504 70160 09064 28021 50587 07330 24034 40756 20364 26042 30964 34565 24550
 25089 443// 25054 20235 545// 26573 15415 651// 27076 10659 675// 24009 88126 687//
 27051 7716027081 40915 0

TTBB 7114/ 72HMS 00876 18664 11864 23466 22713 09861 33684 08268 44663 06863 55627
 05471 66564 00574 77400 20364 88347 25966 99300 34565 11168 615// 22126 687// 33100
 675// 0

TTCC 71141 72HMS 70876 637// 24506 50086 567// 06004 30413 515// 07009 20679 453//
 08013 10143 427// 06513 07386 385// 07520 88999 77999 0

TTDD 7114/ 72HMS 11500 567// 22228 495// 33200 453// 44153 439// 55128 463// 66100
 427// 77070 385// 88053 313// 51515 10190 05621 0

ROCKETSONDE: (1120 MST) RRXX 21181 72269 81010 63101 24553 13011 25552 13011 26548
 12008 28550 09010 30543 10011 35537 06001 40525 06003 45512 18005 47510 24017 50507
 18010 55516 20007 56514 25021 57516 28024 58519 30018 60516 23013 62521 24022 63526
 24029 65529 23016 66528 23024 67529 26037 69538 27048 70544 27045 71/// 27046 75///
 33052 77/// 01059

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 22 September 1977

TIME 1215 (Local) 1815 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	28.0	28.0	30.4		32.7
T _{dp}	7.0	7.0	8.3		4.7
W _s	calm	calm	190 3.1		140 2.2
P	25.95	25.95	25.47		25.91
C	120 ⊖ 180 ⊖	120 ⊖ 180 ⊖	100 ⊖ 260 ⊕		150 ⊖ 250 ⊕
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	70.65	70.65	83.49		91.27
I _a	42.34	42.34	69.89		77.95
I _d	20.13	20.13	41.37		44.64
N	50.94	50.94	75.85		67.27
N _a	40.48	40.48	65.74		42.02
N _b	35.52	35.52	53.10		37.37
N _c	26.94	26.94	41.72		30.71
N _d	14.21	14.21	35.40		23.03
i	28.21	missing	7.90		20.67
i _a	22.16	missing	5.08		19.71
i _d	10.63	missing	4.16		15.84
T _{g/w}	35.0	37.5	36.6		51.1
T _s	42.3	39.5	missing		missing
ψ	19.6	18.7			0.6
ε					
El, Az	56.4 160.5	56.4 160.5	55.8 161.1		56.8 160.1

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 22 September 1977

TIME 1437 (Local) 2037 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	32.4	32.4	36.2		33.7
T_{dp}	8.3	8.3	9.9		5.2
W_d	170	180	180		105
W_s	4.5	4.5	4.5		2.7
C	25.89	25.89	25.41		25.84
M	80 \oplus E170 \oplus	80 \oplus E170 \oplus	80 \oplus 260- \oplus		E150 \oplus 250 \oplus
T_{a25}	No	No	No		No
T_{dp25}					
I	69.43	69.43	54.13		48.30
I_a	56.49	56.49	57.56		40.00
I_d	35.46	35.46	25.03		23.10
N					
N_a					
N_b					
N_c					
N_d					
i	41.90	missing			12.62
i_a	36.91	missing			11.25
i_d	22.23	missing			8.95
$T_{g/w}$	36.1	37.0	37.9		49.0
T_s	40.1	39.0	missing		missing
ψ	19.6	18.7			0.6
ϵ					
El, Az					

REMARKS:

METSAT I, II, IV - NO NORMAL INCOMING DATA DUE TO CLOUDS

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d , W_s = Wind Direction (degree)
 W_s = Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25} , T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL DATELLITE CALIBRATION DATA

DATE: 22 September 1977

RADIOSONDE: (0800 MDT) TTAA 72141 72HMS 99876 13265 00095 // // 85514
 22668 14506 70170 10462 23515 50588 07558 23520 40758 18958 23034 30966 33757
 25047 25092 42159 25551 20239 539// 26074 15419 653// 26058 10661 713// 26025
 28103 717// 28019 77200 26074 41606 0

TTBB 7214/ 72HMS 00876 13265 11866 22067 22859 22868 33815 21669 44700 10462
 55649 06356 66619 03256 77612 03461 88587 01059 99562 01565 11536 03362 22526
 04557 33521 04960 44459 12727 55451 12758 66400 18958 77371 23755 88359 24540
 99334 27156 11250 42159 22150 653// 33127 703// 44118 681// 55112 709// 66103
 717// 77100 713// 0

TTCC 72145 72HMS 70877 611// 19522 50089 581// 24518 30415 515// 17005 20680
 495// 07514 10142 453// 09519 07383 401// 07014 05614 373// 13019 88999 77999
 0

TTDD 7214/ 72HMS 11788 63 7// 22733 653// 33700 611// 44573 567// 55500581//
 66300 515// 77200 495// 88140 435// 99100 453// 11040 35311 0

ROCKETSONDE: (1120K J) 18152 RRXX 22182 72269 81010 13101
 25553 11007 26549 08008 30550 09008 35537 15004 38534 36005 40524 34003 45515
 18004 46511 21009 48508 23017 50509 25012 53508 26022 54508 26026 55508 28019
 56510 26008 57513 22014 58516 25019 60522 28017 61525 22008 62528 21022 65539
 21040 66540 22051 68543 23055 70*** 27068 27863 71*** 28071

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 27 September 1977

TIME 1007 (Local) 1607 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	24.0	24.0			27.5
T _{dp}	12.2	12.2			11.3
W _s	320 2.7	320 2.7			calm
P	25.98	25.98			26.00
C	60 ⊙ 250 ⊙	60 ⊙ 250 ⊙			200- ⊙
M	No	No			No
T _{a25}					
T _{dp25}					
I	57.61	57.61			58.68
I _a	44.56	44.56			47.15
I _d	29.71	29.71			29.46
N	92.90	92.90			88.08
N _a	66.49	66.49			66.67
N _b	61.53	61.53			60.61
N _c	49.73	49.73			50.10
N _d	44.10	44.10			41.41
i	31.70	missing			14.64
i _a	25.05	missing			13.91
i _d	15.84	missing			10.88
T _{g/w}	missing	missing			37.0
T _s	missing	missing			missing
ψ	13.7	19.3			0.6
ε					
El, Az	37.7 122.0	37.7 122.0			37.8 121.6

REMARKS:

METSAT II - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 27 September 1977

TIME 1156 (Local) 1756 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	28.3	28.3			30.5
T_{dp}	11.5	11.5			11.0
d_p	320 2.2	320 2.2			010 2.0
C	25.97	25.97			25.99
T_M	60 (I) 250-(II)	60 (I) 250-(II)			60 (I) 220-(II)
T_{a25}	No	No			No
T_{dp25}					
I	78.32	78.32			83.51
I_a	61.25	61.25			66.17
I_d	41.85	41.85			41.51
N	97.05	97.05			91.31
N_a	68.63	68.63			67.07
N_b	63.00	63.00			61.01
N_c	51.47	51.47			49.49
N_d	45.44	45.44			41.41
i	44.69	missing			19.66
i_a	35.41	missing			17.90
i_d	22.89	missing			13.54
$T_{g/w}$	missing	missing			46.7
T_s	missing	missing			missing
ψ	13.7	19.3			0.6
ϵ					
El, Az	53.2 154.5	53.2 154.5			53.5 154.1

REMARKS:

METSAT II-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (direction and Speed (m/s)); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 27 September 1977

TIME 1220 (Local) 1820 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	29.3	29.3			31.6
T _{dp}	11.0	11.0			10.3
W _d	320	320			calm
W _s	2.7	2.7			
P	25.97	25.97			25.98
C	60 (1) 80 (1) 120 (1)	60 (1) 80 (1) 120 (1)			60 (1) 220 - (1)
M	No	No			No
T _{a25}					
T _{dp25}					
I	82.95	82.95			86.61
I _a	65.68	65.68			68.39
I _d	43.34	43.34			43.33
N	98.53	98.53			93.54
N _a	69.44	69.44			68.48
N _b	63.40	63.40			61.82
N _c	51.88	51.88			50.10
N _d	46.38	46.38			42.02
i	45.25	missing			20.06
i _a	35.70	missing			18.14
i _d	23.21	missing			13.78
T _{g/w}	missing	missing			47.5
T _s	missing	missing			missing
ψ	13.7	19.3			0.6
C					
El, Az	54.9 164.3	54.9 164.3			55.3 164.0

REMARKS:

METSAT II-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = OG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
= Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 27 September 1977

RADIOSONDE: (0800 MDT) TTAA 77141 72HMS 99876 18458 00000 00095 /////
 885524 22062 03502 70184 11661 29015 50591 05561 27522 40761 17544 26026
 30970 31750 26539 25097 407// // 20245 519// 27549 15426 649// 28541
 88999 77175 27553 40312 0

TTBB 7714/ 72HMS 00876 18458 11866 22660 22733 15063 33615 03839 44548
 00956 55532 01563 66471 09560 77434 14336 88400 17544 99342 26120 11300
 31750 22283 35361 33258 38761 44127 723// 55112 751// 51515 10190 10665
 10158 0

TTDD 7714/ 72HMS 51515 10150

ROCKETSONDE: (1205 MDT) RRXX 27181 72269 81010 13101 25553 09005 30542
 09009 35532 04001 40521 02004 45512 12010 46512 13017 47506 15015 50509
 21011 51512 17006 52509 23008 53508 30010 54512 01009 55515 16003 56513
 23014 57513 25011 58518 25005 60519 22016 63*** 27031 64*** 28036 65***
 29027 69*** 34039

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 28 September 1977

TIME 1426 (Local) 2026 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT IV	
T _a	31.6	31.6		34.3	
T _{dp}	17.4	17.4		13.1	
W _d , W _s	calm	calm		200 3.0	
P	25.94	25.94		25.92	
C	yes	yes		60 No	
M					
T _{a25}					
T _{dp25}					
I	77.10	77.10		76.24	
I _a	61.03	61.03		61.31	
I _d	37.70	37.70		36.42	
N	92.90	92.90		85.45	
N _a	65.42	65.42		63.43	
N _b	59.38	59.38		57.78	
N _c	48.66	48.66		46.67	
N _d	43.30	43.30		38.79	
i	missing	missing		17.55	
i _a	27.64	missing		16.45	
i _d	missing	missing		12.82	
T _{g/w}	40.2	37.2		49.2	
T _s	49.7	39.1		missing	
Ψ	15.5	15.1		4.0	
ε					
E1, Az	49.5 216.3	49.5 216.3		49.9 216.5	
REMARKS: METSAT11-NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%);
ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 28 September 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	28.0	28.0		32.7	
T _{dp}	16.5	16.5		13.0	
W _d , W _s	calm	calm		170 3.0	
P	25.90	25.90		25.90	
C	0	0		60 ⊕	
T _{a25} ^M	Yes	Yes		No	
T _{dp25}					
I	83.07	83.07		88.17	
I _a	65.79	65.79		70.08	
I _d	41.64	41.64		42.25	
N	93.16	93.16		90.51	
N _a	65.42	65.42		66.06	
N _b	59.38	59.38		60.61	
N _c	48.26	48.26		49.09	
N _d	42.76	42.76		40.81	
i	missing	missing		19.66	
i _a	29.27	missing		18.02	
i _d	missing	missing		14.03	
T _{g/w}	37.4	35.0		49.4	
T _s	51.0	36.9		missing	
ψ	15.5	15.1		4.0	
ε					
El, Az	55.6 132.0	55.6 182.0		56.0 181.9	
REMARKS:					
METSAT II-NOT OPERATED THIS DAY					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 28 September 1977

ROCKETSONDE:(1427)RRXX 28203 72269 81010 63101 24*** 32001 25547 04000
30539 11007 35531 35007 37522 01009 38522 03014 39520 07018 40513 10016
42509 17011 45508 08003 48501 22008 49002 29012 50502 30010 52505 27016
55510 23007 57512 32005 58514 34002 60520 20016 62526 25023 65*** 28022
66*** 30032 67*** 30036 68*** 28031

NO RADIOSONDE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 5 October 1977 TIME 1206 (Local) 1806 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a					24.3
T _{dp}					17.3
P					063 1.0
C					26.06
M					80 150 210
T _{a25}					yes
T _{dp25}					
I					77.54
I _a					55.59
I _d					37.31
N					
N _a					
N _b					
N _c					
N _d					
i					9.03
i _a					4.84
i _d					3.26
T _{g/w}					33.0
T _s					missing
ψ					
ε					
El, Az					51.6 160.7

REMARKS:

METSAT I, II, NOT OPERATED THIS DAY
METSAT IV- NO NORMAL INCOMING DUE TO CLOUDS

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOONRUN

DATE OF OBSERVATION 5 October 1977 TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} W _s C M T _{a25} T _{dp25}					24.7 17.1 calm 26.06 80 ⊕ 150 ⊕ 200 ⊕ yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d					80.89 62.77 40.80 82.02 62.63 56.57 45.45 38.38 18.66 16.32 11.97
T _{g/w} T _s ψ ε El, Az					34.0 missing 53.2 182.7

REMARKS:

METSAT I and II-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 5 October 1977

RADIOSONDE: (0800 MDT) TTAA 55141 72HMS 99879 17832 00000 00135 /////
 // 85540 10431 00504 70177 09658 343// 25045 25093 417// 25055 20240
 541// 15419 667// 26564 10660 721// 31029 88127 717// 26034 77136 26576
 43120

TTBB 5514/ 72HMS 00879 17832 11784 12013 22750 12457 33700 09658 44648
 04868 55609 01461 66591 00677 77565 02558 88556 02567 99540 04757 11513
 07157 22500 09765 33453 16360 44426 15775 55412 18374 66404 17774 77400
 18574 88372 20374 99330
 TTDD 5514/ 72Hms 11783 681// 51515 10190 70866 0

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMS 9415

DATE OF OBSERVATION 7 October 1977 TIME 1223 (Local) 1823 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a T _{dp} P _s C M T _{a25} T _{dp25}					22.2 15.7 260 5.1 25.78 40 ⊕ E100 ⊕ yes
I I _a I _d N N _a N _b N _c N _d i i _a i _d					18.72 13.74 8.49 3.51 3.02 2.42
T _{g/w} T _s ψ ε El, Az					missing 20.8 51.8 167.9

REMARKS:

METSAT I-NOT OPERATED THIS DAY
METSAT II-NOT OPERATED THIS DAY
METSAT IV-NO NORMAL INCOMING DATA DUE TO CLOUDS

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 7October 1977

RADIOSONDE: TTAA 57141 72HMS 99877 16611 16506 00074 ///// ///// 85527
15411 17013 70153 07633 27523 50586 06111 26052 40757 16347 26045 30968
30760 26029 25095 41359 25543 20242 539// 25576 15421 667// 28040 10660
751// 27549 88999 77188 25578 43015 0

TTBB 5714/ 72HMS 00877 16611 11850 15411 22760 10026 33700 07633 44671
06030 55623 01609 66566 01507 77500 06111 88444 11322 99400 16347 11369
19959 22352 21760 33300 30760 44250 41359 55217 495// 66200 539// 77158
657// 88150 667// 99136 709// 11100 751// 0

TTCC 57142 72HMS 70370 709// 27011 50078 545// 27009 30403 561// 32009
20653 525// 36003 88903 747// 27548 77999 0

TTDD 5714/ 72HMS 11933 759// 22903 747// 33878 683// 44733 717// 55700
709// 66599 639// 77543 579// 88500 545// 99413 565// 11363 551// 22300
561// 33218 521// 44200 525// 55155 435// 0

ROCKETSONDE: (1006MDT) RRXX 07168 72269 81010 13101 25554 08006 30547
10007 35538 23007 38532 26014 39531 26013 40522 26017 41524 28023 45509
27025 46509 26026 48511 27033 50511 26042 55508 26063 56511 26068 60523
27061 61522 27055 65// 29064 66// 28053

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 12 October 1977 TIME 1233 (Local) 1833 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			17.3		19.0
T_{dp}			25		-0.4
W_d, W_s			230 3.1		050 3.1
C			25.81		26.14
M			250- \oplus		250- \oplus
T_{a25}			No		No
T_{dp25}					
I			77.71		81.28
I_a			64.10		68.08
I_d			41.47		43.76
N			101.14		86.26
N_a			75.22		66.87
N_b			68.90		62.63
N_c			55.63		51.92
N_d			48.67		44.65
i			8.58		19.96
i_a			3.31		17.90
i_d			2.84		13.91
$T_{g/w}$			27.0		30.8
T_s			missing		30.1
ψ					1.3
e					
El, Az			49.4 183.5		50.6 183.3

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 e = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 12 October 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			17.8		20.0
T_{dp}			1.9		0.2
W_s			240		160
C			3.1		3.1
T_{a25}			25.78		26.14
T_{dp25}			250- \ominus		250- \oplus
			No		No
I			77.16		73.62
I_a			62.77		61.31
I_d			40.26		38.82
N			101.77		86.02
N_a			74.59		63.23
N_b			68.27		60.00
N_c			57.52		50.10
N_d			50.57		41.82
i			8.18		17.95
i_a			3.55		15.84
i_d			2.94		12.33
$T_{g/w}$			24.5		30.7
T_s			missing		32.3
ψ_s					1.3
ϵ					
El, Az			49.4 183.5		50.6 183.3

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 12 October 1977

RADIOSONDE: (1000MDT) TTAA 62161 72HMS 99888 11660 36006 00251 // // // //
 85620 07862 07002 70208 04071 13003 50589 08776 34006 40758 22573 35011
 30962 391// 34520 25085 473// 27539 20231 537// 29093 15314 647// 28064
 10654 693// 29003 88168 647// 27050 77164 25101 42653 0

TTBB 6216/ 72HMS 00888 11660 11880 10664 22850 07862 33770 06061 44760
 06664 55700 04071 66670 01471 77650 02479 88621 01478 99585 00478 11532
 05777 22500 08776 33400 22573 44355 28772 55300 391// 66250 473// 77200
 537// 88180 623// 99168 647// 11159 625// 22150 647// 33105 681// 44100
 693// 0

TTCC 62161 72HMS 70869 659// 30020 50076 607// 03529 30400 543// 30010
 20653 497// 27517 10121 471// 26529 88999 77999 0

DD 6216/ 72HMS 11700 659// 22583 617// 33500 607// 44423 525// 55348565//
 66300 543// 77200 497// 88173 473// 99148 477// 11100 471// 0

ROCKETSONDE: (1125MDT) RRXX 12173 72269 81010 63101 25550 15002 30545
 02004 32537 06000 35538 25003 39529 25029 40527 26028 42517 26028 43511
 26030 45509 26028 50504 24038 55513 25050 57517 26065 60520 26068 65527
 26055 66526 26054 67527 26051 68531 25060 69536 26060 70542 29033 72//
 31038

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 13 October 1977

TIME 0955 (Local) 1555 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a			12.2		14.0
T _{dp}			2.0		1.3
W _s			160 2.2		calm
P			25.69		26.20
C			150 ☉		☉
M			No		No
T _{a25}					
T _{dp25}					
I			46.88		47.62
I _a			38.36		40.06
I _d			24.62		26.02
N			86.60		87.27
N _a			65.74		67.07
N _b			60.68		62.02
N _c			50.57		50.91
N _d			43.62		43.03
i			4.95		12.14
i _a			2.48		11.12
i _d			2.23		8.59
T _{g/w}			16.3		19.3
T _s			missing		20.1
ψ					
ε					
El, Az			missing missing		missing missing

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OGS30, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 13 October 1977

TIME 1032 (Local) 1632 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			18.9		15.9
T_{dp}			2.9		0.4
d_p			180 2.7		calm
C			25.68		26.20
T_{a25}			150 \odot		\odot
T_{dp25}			No		No
I			44.22		53.54
I_a			35.90		47.25
I_d			26.24		30.97
N			89.13		89.29
N_a			66.37		67.88
N_b			61.31		61.62
N_c			51.20		50.91
N_d			44.25		43.43
i			5.16		14.14
i_a			3.07		12.58
i_d			2.43		9.67
$T_{g/w}$			18.1		22.2
T_s			missing		21.7
ψ					
ϵ					
El, Az			missing missing		missing missing

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 9415

DATE OF OBSERVATION 13 October 1977

TIME 1219 (Local) 1819 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a			19.8		21.1
T _{dp}			1.5		-0.3
W _s			210 4.0		calm
C			25.64		26.13
T _M			140 [⊙] 220 [⊙]		○
T _{a25}			No		No
T _{dp25}					
I			78.62		76.55
I _a			67.49		61.63
I _d			43.09		39.89
N			92.92		92.53
N _a			69.53		69.90
N _b			63.21		63.84
N _c			53.73		52.53
N _d			46.14		44.04
i			6.64		17.85
i _a			4.49		15.36
i _d			3.55		11.73
T _{g/w}			21.2		32.2
T _s			missing		33.4
ε					
El, Az			missing missing		missing missing

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 13 October 1977 TIME 1448 (Local) 2048 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			21.2		23.2
T_{dp}			2.0		2.6
W_d			210		calm
P			25.57		26.08
C			220-①		○
M			No		No
T_{a25}					
T_{dp25}					
I			65.69		67.12
I_a			52.62		54.23
I_d			33.10		34.62
N			92.92		90.51
N_a			69.53		67.88
N_b			63.21		62.42
N_c			51.20		51.52
N_d			45.51		43.23
i			5.27		15.65
i_a			3.66		13.66
i_d			3.04		10.52
$T_{g/w}$			27.5		35.1
T_s			missing		34.1
ψ					
E					
El, Az			missing missing		missing missing

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d , W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition ^s (symbolic); M = Precipitation (Yes/No); T_{a25} , T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 E = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE 13 October 1977

RADIOSONDE: (0900 MDT) TTAA 63151 72HMS 99883 04842 00000 00200 /////
 // 85569 09463 33002 70164 03242 24515 50583 13159 25524 40749 24166
 26033 30952 399// 27031 25074 491// 27048 20218 581// 27582 15396 659//
 26527 10639 675// 27025 88135 697// 26546 77202 27076 43212 0

TTBB 6315/ 72HMS 00883 04842 11873 09862 22850 09463 33765 07263 44734
 05462 55700 03242 66685 02035 77654 00457 88644 01063 99626 01467 11562
 04566 22500 13159 33461 18956 44446 21558 55439 20165 66400 24166 77534
 30365 88317 36963 99300 399// 11250 491// 22234 525// 33223 533// 44200
 581// 55170 623// 66150 659// 77135 697// 88100 675// 51515 SUPER 46-45
 0

TTCC 63151 72HMS 70853 667// 27015 50060 605// 21504 30384 545// 05004
 20644 521// 04503 10102 427// 06502 88999 77999 0

TTDD 6315/ 72HMS 11893 695// 22700 667// 33539 617// 44500 605// 55438
 551// 66388 575// 77313 539// 88300 545// 99268 555// 11200 521// 22;33
 471// 33100 427// 0

ROCKETSONDE: (1015 MDT) RRXX 13162 72269 81010 13101 25555 14002 27552
 11009 30546 10003 35542 18004 37536 25017 39531 25033 40530 26034 42526
 27834 43520 27035 45510 27027 47504 25041 50507 26044 55510 24048 63524
 25067 63525 25066 64*** 27060

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA VI

DATE OF OBSERVATION 19 October 1977 TIME 1017 (Local) 1617 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	12.0	12.0			19.8
T _{dp}	2.3	2.3			-2.2
W _s	260	260			020
P	1.8	1.8			3.1
C	26.00	26.00			26.06
M	○	○			○
T _{a25}	No	No			NO
T _{dp25}					
I	54.08	54.08			missing
I _a	42.13	42.13			42.18
I _d	30.03	30.03			26.64
N	89.54	89.54			88.28
N _a	59.52	59.52			67.88
N _b	53.09	53.49			62.63
N _c	48.39	48.39			51.72
N _d	43.03	43.03			44.44
i	missing	28.92			13.24
i _a	25.36	missing			12.09
i _d	15.84	16.92			9.31
T _{g/w}	40.3	40.0			30.0
T _s	missing	missing			28.4
ψ	21.6	19.2			1.2
ε					
El, Az	missing	missing			missing

REMARKS:

METSAT II-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG69:
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 19 October 1977 TIME 1215 (Local) 1815 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	16.4	16.4			24.6
T _{dp}	missing	missing			1.0
W _s	calm	calm			160 1.5
C	26.01	26.01			26.04
M	○	○			○
T _{a25}	No	No			No
T _{dp25}					
I	73.93	73.93			missing
I _a	58.39	58.39			59.09
I _d	38.98	38.98			37.57
N	96.25	96.25			93.94
N _a	66.49	66.49			70.57
N _b	62.06	62.06			64.85
N _c	50.80	50.80			53.74
N _d	45.71	45.71			44.85
i	missing	36.44			17.65
i _a	30.92	missing			15.24
i _d	18.22	19.64			11.61
T _{g/w}	28.0	28.2			35.0
T _s	26.0	28.5			36.8
ψ	21.6	19.2			1.2
c					
El, Az	missing	missing			missing

REMARKS:

METSAT II-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 19 October 1977 TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	22.8	22.8			26.6
T _{dp}	3.9	3.9			-0.1
W _s	110 2.2	110 2.2			100 1.0
P	missing	missing			26.02
C	○	○			○
M	No	No			No
T _{a25}					
T _{dp25}					
I	76.61	76.61			missing
I _a	61.03	61.03			60.68
I _d	39.72	39.72			37.88
N	96.51	96.51			93.33
N _a	66.49	66.49			70.51
N _b	61.93	61.93			64.44
N _c	50.94	50.94			53.33
N _d	45.71	45.71			44.44
i	missing	40.15			18.15
i _a	35.26	missing			15.60
i _d	21.04	22.66			12.09
T _{g/w}	31.0	33.0			35.9
T _s	27.0	29.5			37.1
ψ	21.6	19.2			1.2
ε					
El, Az					

REMARKS:

METSAT II-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 19 October 1977

RADIOSONDE: (0800MDT) TTAA 69141 72HMS 99878 11864 00000 00128 /////
// 85533 16864 14504 70168 07664 29003 50583 13764 11506 40749 25758
08506 30951 405// 28017 25074 461// 29026 20220 519// 28034 15403 595//
26035 88999 77154 26037 409//

TTBB 6914/ 72HMS 00878 11864 11867 16664 22857 17265 33812 16864 44577
05764 55565 05967 66500 13764 77455 17763 88400 25758 99362 32357 11312
39361 22217 507// 33173 551// 44135 631// 51515 10158

TTDD 6914/ 72HMS 51515 10150

ROCKETSONDE: (1140 MDT) RRXX 19174 72269 81010 63101 30*** 13002 33545
28007 35539 26019 37536 27026 40521 28030 42521 27032 45510 28045 50503
27053 55508 26057 59515 26053 60518 26061 63525 28061 65529 29052 66532
30057 67537 30065 68541 31059 69543 27032 70*** 23033 73// 22035

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAAV

DATE OF OBSERVATION 20 October 1977

TIME 1037 (Local) 1637 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			22.0		21.2
T_{dp}			6.4		5.2
d_p			170 2.2		calm
C			25.5		26.00
T_M			180 \odot		\odot
T_{a25}			No		No
T_{dp25}					
I			missing		missing
I_a			46.46		44.71
I_d			28.56		28.10
N			93.55		90.51
N_a			69.53		68.48
N_b			64.48		63.43
N_c			51.83		52.12
N_d			44.25		43.64
i			5.37		14.14
i_a			2.01		12.82
i_d			1.72		9.92
$T_{g/w}$			24.8		missing
T_s			32.1		27.2
ψ					0.5
c					
El, Az			missing		missing

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree and Speed (m/s)); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_d = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION Nimbus VI

DATE OF OBSERVATION 20 October

TIME 1215 (Local) 1815 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			24.7		26.8
T_{dp}			10.1		0.6
W_s			200 4.0		060 2.1
C			25.49		25.96
T_{a25}			70 \odot		\odot
T_{dp25}			No		No
I			72.57		missing
I_a			59.38		58.46
I_d			37.03		35.17
N			97.35		95.15
N_a			72.06		71.92
N_b			67.00		56.06
N_c			54.36		53.94
N_d			46.78		46.67
i			6.11		17.85
i_a			3.90		16.08
i_d			3.25		12.58
$T_{g/w}$			29.1		missing
T_s			36.0		45.4
ψ					0.5
c					
El, Az			missing		missing

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 20 October 1977

TIME 1418 (Local) 2018 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			25.9		27.7
T_{dp}			2.2		0.8
W_s			190 6.3		060 5.1 G10.3
C			25.43		25.92
T_{a25}			70 (1)		60 (1)
T_{dp25}			No		No
I			67.61		missing
I_a			54.26		55.39
I_d			33.91		34.03
N			96.08		94.14
N_a			72.06		70.71
N_b			65.74		65.25
N_c			53.10		52.73
N_d			45.51		45.05
i			5.58		17.05
i_a			3.90		15.36
i_d			3.14		11.85
$T_{g/w}$			31.8		missing
T_s			41.6		55.0
ψ					0.5
ϵ					
El, Az			missing		missing

REMARKS:

METSAT I-NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree and Speed (m/s)); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 20 October 1977

RADIOSONDE: (0700 MDT) TTAA 70131 72HMS 99876 09258 06002 00127 /////
 85512 18661 18508 70145 06458 26014 50582 10962 24513 40759 24361 24514
 30951 42558 25525 25072 477// 26036 20218 543// 27028 15399 617// 28033
 10645 681// 27527 77244 26037 41221

TTBB 7013/ 72HMS 00876 09258 11866 17460 22857 18861 33765 13061 44719
 08660 55644 00405 66628 01504 77611 02531 88586 05701 99568 07749 11565
 05562 22560 04564 33500 10962 44431 21760 55400 24361 66300 42558 77290
 445// 88213 511// 99130 661// 11105 693// 22100 681//

TTCC 70132 72HMS 70861 641// 25006 50070 581// 18504 30393 535// 09504
 20654 513// 0507 88999 77999

TTDD 7013/ 72HMS 11500 581// 22378 577// 33300 535// 44228 543// 55158
 471//

ROCKETSONDE: (1200MDT) RRXX 20180 72269 81010 13101 25553 13001 28548
 03004 30551 05005 31548 09002 33539 23011 35539 26019 38533 25029 40526
 28027 42515 27030 43509 28033 45508 28041 47507 26038 50507 26049 51510
 26036 53512 25057 54512 26061 55515 26056 56518 26055 57520 26059 60513
 26069 64524 27073 65*** 28072 67*** 29066 *****

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 25 October 1977 TIME 1211 (Local) 1811 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	17.9	17.9	25.2		23.9
T_{dp}	3.5	3.5	2.1		-3.9
d'_{pws}	180 2.2	180 2.2	260 2.2		calm
P	26.10	26.10	25.63		26.07
C	0	0	0		0
T_{a25}	No	No	No		No
T_{dp25}					
I	73.45	73.45	70.37		103.89
I_a	58.08	58.08	62.22		59.30
I_d	39.08	39.08	36.73		38.92
N	99.46	99.46	104.30		99.39
N_a	68.77	68.77	77.75		75.15
N_b	64.34	64.34	72.06		69.29
N_c	53.08	53.08	60.05		57.58
N_d	47.32	47.32	52.47		48.48
i	missing	37.43	6.53		18.15
i_a	29.46	33.61	3.31		16.20
i_d	19.31	21.29	2.94		12.21
$T_{g/w}$	25.5	28.9	30.8		35.5
T_s	28.0	29.0	37.5		34.7
ψ	21.9	19.1			0.6
ϵ					
El, Az	39.1 211.2	39.1 211.2	39.3 211.2		40.3 211.3

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 25 October 1977

TIME 1425 (Local) 2025 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	25.1	25.1	26.9		25.5
T _{dp}	7.7	7.7	0.1		-4.1
W _s	070 1.8	070 1.8	250 4.5		068 1.5
P	26.03	26.03	25.52		25.99
C	0	0	0		0
M	No	No	No		No
T _{a25}					
T _{dp25}					
i	66.14	66.14	67.25		69.78
I _a	53.75	53.75	57.22		55.71
I _d	36.21	36.21	34.21		36.77
N	98.79	98.79	99.87		96.57
N _a	68.50	68.50	74.59		72.93
N _b	64.75	64.75	68.90		67.27
N _c	53.22	53.22	57.52		55.76
N _d	47.45	47.45	50.57		46.87
i	missing	33.41	6.32		15.25
i _a	26.30	29.69	4.85		15.11
i _d	17.14	18.73	3.96		10.40
T _{g/w}	29.3	30.2	33.5		41.0
T _s	26.4	30.0	41.5		37.9
ψ	21.9	19.1			0.6
ε					
El, Az	missing missing	missing missing	missing missing		missing missing

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 25 October 1977

RADIOSONDE: (0800 MDT) TTAA 75141 72HMS 99879 05646 00000 00179 /////
 // 85541 16264 31001 70166 05662 12006 50585 10964 33009 40752 23363
 31517 30957 36561 05061 25081 453// 05574 20227 547// 04584 15409 615//
 04572 10655 683// 02519 88115 697// 03529 77162 03596 41740

TTBB 7514/ 72HMS 00879 05646 11869 11461 22859 15863 33837 16664 44700
 05662 55599 01765 66588 01967 77471 14565 88441 19060 99400 23363 11300
 36551 22289 38961 33178 585// 44161 585// 55150 615// 697// 77105 671//
 88100 683//

TTCC 75141 72HMS 70870 639// 04004 50078 619// 01005 30399 567// 24506
 20657 543// 01006 10110 481// 30510 88999 77999

TTDD 7514/ 72HMS 11768 671// 22700 639// 33400 619// 44328 559// 55200
 543// 66143 489// 77100// 481// 88088 451//

ROCKETSONDE: (1230 MDT). RRXX 25183 72269 81010 13101 25557 02005 30550
 26007 35541 26024 38531 27041 40531 28043 41531 27041 40531 28043 41531
 27043 45513 26047 465k3 25051 47512 25066 50508 27073 52509 26070 64521
 24074 65*** 24078 67*** 25088 69*** 27084

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 26 October 1977

TIME 1143 (Local) 1743 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	16.6	16.6	23.2		22.9
T _{dp}	4.4	4.4	0.9		0.5
W _s	280 1.8	280 1.8	200 3.1		calm
P	26.07	26.07	25.65		26.07
C	○	○	○		○
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	69.55	69.55	67.43		missing
I _a	54.80	54.80	55.49		54.76
I _d	37.27	37.27	34.91		35.27
N	98.79	98.79	101.14		96.97
N _a	71.18	71.18	75.85		73.74
N _b	65.28	65.28	69.83		67.07
N _c	54.83	54.83	58.15		55.76
N _d	49.06	49.06	51.83		47.68
i	33.33	34.82	6.53		15.95
i _a	27.64	31.34	4.02		15.44
i _d	17.90	19.96	3.25		10.17
T _{g/w}	25.2	25.5	26.8		34.0
T _s	23.3	25.8	35.2		21.0
ψ	22.0	19.1			1.0
c					
El, Az	missing missing	missing missing	missing missing		missing missing

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
= Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 26 October 1977

RADIOSONDE: (0800 MDT) TTAA 72HMS 99879 08058 00000 00176 // // //
 85544 15662 15004 70167 05263 19007 50584 08765 11018 40753 20963 10035 30959
 35761 09053 25083 429// 09058 20231 511// 09557 15413 627// 09555 10658 725//
 09513 88100 725// 09513 77210 09562 40302

TTBB 7614/ 72HMS 00879 08058 11869 14461 22844 16463 33803 14463 44713 05460
 55679 03863 66668 04465 77619 00865 88611 00865 99555 05164 11500 08765 22400
 20963 33324 32562 44280 39161 55264 403// 66250 429// 77217 497// 88200 511//
 99150 627// 11130 643// 22100 725//

TTCC 76142 72HMS 70872 641// 15010 50079 607// 19525 30399 575// 23010 20657
 551// 09506 88999 77999

TTDD 7614/ 72HMS 11964 727// 22888 677// 33798 681// 44700 641// 55558 635//
 66500 607// 77423 587// 88368 605// 99228 545// 11200 551// 22168 525//

ROCKETSONDE: (1325 MDT) RRRX 26193 72269 81010 63101 25555 23003 30550 27009
 35540 26033 40528 27052 43518 27046 45513 26052 46510 26065 49502 25071 50504
 26071 52508 26070 55510 25085 56508 25086 57508 25077 58512 26068 60514 27071
 61518 28079 62523 29084 63530 29078 64532 27080 65531 26099 66530 26110 70550
 28087 72/// 29042

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 28 October 1977

TIME 1038 (Local) 1638 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	15.9	15.9			20.2
T_{dp}	5.3	5.3			7.7
W_s	060 2.2	060 2.2			350 2.1
P	26.10	26.10			26.00
C	0	0			0
T_{a25}	No	No			No
T_{dp25}					
I	56.39	56.39			missing
I_a	43.93	43.93			42.81
I_d	30.14	30.14			27.20
N	96.38	96.38			92.12
N_a	71.85	71.85			68.89
N_b	64.88	64.88			65.05
N_c	54.42	54.42			53.33
N_d	48.26	48.26			45.05
i	27.86	30.25			12.94
i_a	23.61	27.32			12.44
i_d	15.51	17.30			8.37
$T_{g/w}$	missing	missing			25.2
T_s	missing	missing			27.5
ψ	17.8	19.8			1.5
ϵ					
El, Az	34.7 140.1	34.7 140.1			35.0 139.8

REMARKS:

MET SAT II - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS 6

DATE OF OBSERVATION 28 October 1977

TIME 1206 (Local) 1806 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	21.5	21.5			24.7
T _{dp}	5.3	5.3			4.6
W _s	130 1.3	130 1.3			calm
P	25.10	26.10			26.01
C	0	0			0
M	No	No			No
T _{a25}					
T _{dp25}					
I	69.55	69.55			missing
I _a	54.70	54.70			55.50
I _d	36.63	36.63			35.48
N	100.27	100.27			95.56
N _a	74.13	74.13			71.52
N _b	66.89	66.89			66.67
N _c	55.90	55.90			54.55
N _d	49.60	49.60			45.45
i	33.33	35.15			16.25
i _a	27.64	31.65			15.89
i _d	18.22	19.86			10.38
T _{g/w}	missing	missing			35.2
T _s	26.0	31.0			41.8
ψ	17.8	19.8			1.5
e					
E1, Az	43.3 165.6	43.3 165.6			43.7 165.3

REMARKS:

METSAT II - NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (Degree) and Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
e = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 28 October 1977
 RADIOSONDE: (0800 MDT)

TTAA 78141 72HMS 99878 0249 00000 00164 // // // 85534 16461 21002
 70155 05460 26010 50584 09166 30013 40753 19360 29523 30961 35161
 29513 25086 455// 28021 20232 519// 28041 15414 625// 27533 10657
 739// 29025 88102 743// 29034 77185 28348 41605 0

TTBB 7814/ 72HMS 00878 08249 11868 22857 16460 33853 17061 44661 01659
 55634 01462 66623 02265 77512 07967 88500 09166 99479 10765 11464 11759
 22457 12557 33400 19360 44280 39561 55238 481// 66209 519// 77184 539//
 88156 625// 99102 743// 11100 739// 0

TTCC 78141 72HMS 70869 669// 23514 50074 627// 30510 30391 579// 30012
 20647 557// 29514 10093 523// 28020 07325 475// // // 88999 77999 0

TTDD 7814/ 72HMS 11818 681// 22758 695// 33500 627// 44398 629// 55300
 579// 66248 587// 77220 539// 88178 563// 99100 523// 11088 525// 22070
 475// 0

ROCKETSONDE: (1035 MDT) RRXX 28164 72269 81010 13101 25558 33001 30552
 24009 32546 27022 33541 27023 35541 26025 37536 26039 40530 26043 41525
 27048 42527 27049 43525 27050 45515 27053 50508 26063 55511 26075 60516
 26090 62515 26088 63519 26087 65524 24066 66*** 23069

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 31 October 1977 TIME 0924 (Local) 1624 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a			16.3		20.9
T _{dp}			1.7		5.4
W _s			260 3.1		missing 8.2
P			25.46		25.89
C			250 - ①		80 ① 250 - ①
M			yes		yes
T _{a25}					
T _{dp25}					
I			51.38		52.02
I _a			42.26		43.13
I _d			26.74		27.53
N			88.50		91.52
N _a			65.16		67.68
N _b			58.15		64.44
N _c			44.25		53.33
N _d			36.66		45.25
i			5.80		12.84
i _a			3.78		12.33
i _d			3.04		8.47
T _{g/w}			13.0		26.0
T _s			16.5		21.9
ψ					
ε					
El, Az			31.5 137.9		32.2 137.2

REMARKS:

METSAT I - NOT OPERATED THIS OBSERVATION

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 31 October 1977

TIME 0932 (Local) 1632 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a			17.5		20.9
T_{dp}			1.6		5.4
W_s			220 2.7		missing 8.2
P			25.45		25.90
T_{a25}			250 - \oplus		80 \oplus 250 - \oplus
T_{dp25}			yes		yes
I			50.09		52.00
I_a			40.21		43.13
I_d			25.43		27.53
N			89.76		91.52
N_a			68.27		67.68
N_b			61.97		64.44
N_c			51.83		53.33
N_d			40.46		45.25
i			5.69		12.74
i_a			3.55		12.44
i_d			2.94		8.58
$T_{g/w}$			17.0		26.0
T_s			17.0		21.9
ψ					0.7
c					
El, Az			32.6 139.8		33.4 139.1

REMARKS:

METSAT I - NOT OPERATED THIS RUN

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 31 October 1977

TIME 1148 (Local) 1748 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	13.5	13.5	18.4		22.1
T_{dp}	7.0	7.0	0.3		7.3
d_p	120 3.1	120 3.1	210 3.1		190 2.2
P	25.92	25.92	25.46		25.90
C	E 180 \oplus 200 \oplus	E 180 \oplus 200 \oplus	130 \oplus 200 - \oplus		80 \oplus 250 - \oplus
T_{a25}	No	No \oplus	yes		yes
T_{dp25}					
I	66.38	66.38	53.12		64.22
I_a	52.59	52.59	26.56		54.12
I_d	34.72	34.72	19.27		34.95
N	56.03	56.03	50.57		95.15
N_a	40.75	40.75	29.08		70.51
N_b	40.48	40.48	17.70		65.66
N_c	38.87	38.87	10.11		53.94
N_d	34.05	34.05	8.85		45.45
i	32.60	34.60	4.21		15.65
i_a	26.49	29.38	2.60		15.33
i_d	17.68	19.04	2.03		10.06
$T_{g/w}$	22.9	24.2	23.0		30.0
T_s	19.8	20.4	18.9		27.2
ψ	18.2	17.3			0.9
c					
El, Az	41.2 160.2	41.2 160.2	40.6 160.6		41.6 160.0

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 31 October 1977

RADIOSONDE: (0900 MST) TTAA 81161 72HMS 99876 16664 00000 00117 /////
 // 85509 14662 24004 70118 04864 27022 50579 11760 26033 40746 23358
 25548 30950 38557 26049 10644 661// 27043 88229 543// 27055 77185 29591
 43946 0

TTBB 8116/ 72HMS 00876 16664 11865 14661 22850 14662 33724 04863 44700
 04864 55620 00264 66543 0636277421 21356 88400 23358 99374 25761 11279
 42757 22229 543// 33210 543// 44200 507// 55193 511// 66165 567// 77150
 611// 88139 637// 99119 657// 11107 647// 22100 661// 0

TTCC 81167 72HMS 70863 677// 27020 50069 613// // 88999 77999 0

TTDD 8116/ 72HMS 11888 661// 22768 705// 33700 677// 44688 689// 55578
 629// 66500 613// 0

ROCKETSONDE: (1100 MST) RRXX 31126 72269 81010 13101 25559 29003 30549
 30006 35539 27026 39533 28033 40528 28029 43522 28030 45513 28033 50517
 27051 51516 26053 52513 26054 53523 26058 54532 26063 55529 26064 56524
 27065 57520 27069 58515 27075 60523 27058 62522 26082 63*** 25096 64***
 25106 65*** 25106 68*** 27080

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 1 November 1977

TIME 0937 (Local) 1637 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	12.4	12.4	10.4		13.0
T _{dp}	3.0	-3.0	-6.0		-3.9
W _s	360 9.8	360 9.8	360 4.0		270 5.1
P	26.03	26.03	25.61		26.00
C	E 220 ⊕	E 220 ⊕	180 ⊕ E 200 ⊕		E 165 ⊕
M _{a25}	No	No	No		No
T _{dp25}					
I	58.34	58.34	35.14		missing
I _a	47.62	47.62	30.56		23.68
I _d	32.48	32.48	18.16		15.59
N			35.15		
N _a			27.56		
N _b			31.35		
N _c			20.99		
N _d			31.35		
i	35.77	38.41	4.43		7.32
i _a	29.56	34.33	3.07		7.11
i _d	20.50	21.49	2.64		4.77
T _{g/w}	missing	missing	13.9		17.3
T _s	12.9	14.9	17.8		30.1
ψ	18.8	18.6			1.8
C					
E1, Az	33.5 140.7	33.5 140.7	33.0 141.2		33.8 140.5

REMARKS:

METSAT I & IV NO NORMAL INCOMING DUE TO CLOUDS

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
= Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 1 November 1977 TIME 1049 (Local) 1749 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	16.7	16.7	11.8		14.8
T_{dp}	-3.9	-3.9	-5.9		-4.8
P	010 7.6	-3.9	14 6.3		300 7.7
C	26.03	26.03	25.61		26.00
M	E 210 (III)	E 210 (III)	E 200 (III)		170 (I)
T_{a25}	No	No	No		No
T_{dp25}					
I	71.13	71.13	58.81		missing
I_a	56.07	56.07	48.10		59.20
I_d	38.45	38.45	33.10		37.42
N			66.12		80.61
N_a			47.41		70.51
N_d			45.64		62.22
N_c			35.02		49.49
N_d			29.08		45.66
i	41.73	43.96	6.53		16.75
i_a	34.74	39.38	4.73		15.56
i_d	23.43	24.36	3.65		10.17
$T_{g/w}$	missing	missing	15.3		25.0
T_s	16.7	17.0	21.5		23.2
ψ	18.8	18.6			1.8
ϵ					
El, Az	41.0 160.7	41.0 160.7	40.3 161.0		41.3 160.4

REMARKS:

METSAT I - NO NORMAL INCOMING DUE TO CLOUDS

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 1 November 1977

RADIOSONDE: (0700 MST) TTAA 51141 72HMS 99877 09866 36017 00136 // // // //
 85513 08459 01020 70086 01959 31027 50571 15159 29060 40735 29158 31582 30933
 46541 31088 25052 507// 31064 20197 555// 31071 15377 601// 29052 10629 587//
 29550 88276 507// 31077 77314 31089 41114 0

TTBB 5114/ 72HMS 00877 09866 11867 09059 22775 02459 33649 05360 44622 06560
 55580 06559 66400 29158 77321 41740 88300 46541 99276 507// 11266 499// 22200
 555// 33187 581// 44162 605// 55139 601// 11100 587// 51515 10186 //115 633//
 0

TTCC 51141 72HMS 70849 645// 27519 50057 601// 34510 30375 585// 26514 20634
 545// 29010 10085 481// 27018 07323 419// // // 88999 77999 0

TTDD 5114/ 72HMS 11738 671// 22661 619// 33618 641// 44500 601// 55318 607//
 66248 537// 77200 545// 88100 481// 99070

NO ROCKETSONDE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 2 November 1977

TIME 0843 (Local) 1543 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	4.8	4.8	7.5		11.0
T _{dp}	-5.4	-5.4	-6.9		-7.7
P	300 0.9	300 0.9	330 1.3		030 2.1
C	25.97	25.97	25.49		25.94
M	0	0	0		0
T _{a25}	No	No	No		No
T _{dp25}					
I	41.41	41.41	21.83		missing
I _a	32.42	32.42	18.56		30.02
I _d	23.64	23.64	12.21		19.89
N	96.78	96.78	82.55		91.92
N _a	75.47	75.47	66.25		70.51
N _b	69.57	69.57	62.07		66.26
N _c	56.84	56.84	52.09		55.35
N _d	50.13	50.13	45.26		46.87
i	21.29	25.68	3.58		9.83
i _a	17.95	22.89	2.60		9.78
i _d	12.36	14.64	2.33		6.67
T _{g/w}	missing	missing	24.1		12.2
T _s	3.8	4.1	11.0		32.0
ψ	14.2	13.7			
ε					
El, Az	25.2 129.1	25.2 129.1	24.8 120.5		20.4 128.9

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W = Wind Direction (degrees); S = Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WC280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI
DATE OF OBSERVATION 2 November 1977 TIME 1109 (Local) 1809 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	14.0	14.0	14.9		17.0
T _{dp}	-6.2	-6.2	-2.1		-4.8
W _s	320 2.2	320 2.2	360 1.8		calm
P	25.97	25.97	25.52		25.93
C	0	0	0		0
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	70.89	70.89	67.34		missing
I _a	55.65	55.65	55.08		53.38
I _d	37.81	37.81	35.32		33.55
N	105.50	105.50	102.78		99.39
N _a	79.89	79.89	77.75		73.94
N _b	73.06	73.06	71.68		68.69
N _c	59.65	59.65	59.12		56.36
N _d	52.41	52.41	51.58		47.07
i	37.83	41.78	6.74		15.75
i _a	31.09	37.32	4.14		15.22
i _d	20.50	23.44	3.55		9.96
T _{g/w}	20.0	21.0	missing		29.1
T _s	22.8	22.4	24.0		43.6
ψ	14.2	13.7			1.0
ε					
El, Az	41.8 167.0	41.8 167.0	41.2 167.3		42.2 166.8

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 2 November 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	15.4	15.4	17.0		18.0
T _{dp}	-9.9	-9.9	0.4		-7.8
P	320 4.0	320 4.0	calm		calm
C	25.90	25.90	25.45		25.99
M	0	0	0		0
T _{a25}	No	No	No		No
T _{dp25}					
I	72.59	72.59	69.63		missing
I _a	57.34	57.34	55.49		54.86
I _d	38.23	38.23	35.82		35.91
N			103.41		99.39
N _a			78.13		73.74
N _b			72.19		68.69
N _c			59.67		56.16
N _d			51.83		46.87
i	38.93	43.53	6.74		15.95
i _a	31.67	38.76	3.66		15.67
i _d	20.72	23.85	3.14		10.06
T _{g/w}	27.0	26.0	missing		30.2
T _s	20.0	21.1	24.0		46.1
ψ	14.2	13.7			1.0
ε					
El, Az	42.7 183.7	42.7 183.7	42.0 183.8		43.1 183.6

REMARKS:

METSAT I - NO NORMAL INCOMING DATA THIS RUN

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WC280, N_a = GG495, N_b = OG530, N_c = RG530, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 2 November 1977

RADIOSONDE: (0800 MST) TTAA 52151 72HMS 99876 08259 35006 00146 // // // //
 85507 08469 35011 70090 03066 35024 50578 08567 35554 40747 19570 35059 30954
 36363 35564 25078 459// 35582 20223 547// 35564 15403 647// 35567 10646 701//
 33036 88138 675// 35515 99283 35587 40223

TTBB 5215/ 72HMS 00867 08259 11866 08469 22850 08469 33750 02866 44741 04867
 55688 02266 66656 03868 77631 03266 88525 05161 99400 19570 11300 36363 22250
 459// 33150 647// 44138 675// 55115 677// 66108 701// 77100 701// 0

TTCC 52151 72HMS 70861 643// 35512 50066 633// 03502 30384 577// 25006 20642
 533// 27011 10093 473// 34524 07332 415// 31023 88999 77999 0

TTDD 5215/ 72HMS 00922 723// 22823 641// 33728 663// 44700 643// 55618 663//
 66576 643// 77508 653// 88500 633// 99363 611// 11333 565// 22300 577// 33178
 505// 44125 517// 55100 475// 66070 415// 77061 39711 51515 10186 11841 677//
 10190 05553 0

NO ROCKETSONDE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 3 November 1977

TIME 0901 (Local) 1601 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	5.6	5.6	15.2		14.8
T _{dp}	-2.6	-2.6	-0.2		-3.6
W _s	290	290	020		calm
P	5.6	3.6	4.5		
C	26.03	26.03	25.59		25.98
M	○	○	○		○
T _{a25}	No	No	No		No
T _{dp25}					
I	43.36	43.36	44.77		missing
I _a	35.27	35.27	37.33		missing
I _d	25.13	25.13	23.71		22.69
N	97.05	97.05	95.07		92.32
N _a	75.07	75.07	73.32		70.30
N _b	69.03	69.03	67.64		61.21
N _c	56.70	56.70	56.26		50.91
N _d	50.00	50.00	49.18		45.86
i	24.82	28.07	5.37		10.13
i _a	21.02	25.36	3.53		10.67
i _d	14.32	16.27	3.35		6.46
T _{g/w}	12.0	11.0	9.2		22.5
T _s	10.0	10.5	17.7		28.0
ψ	missing	missing			1.1
ε					
El, Az	27.8 133.0	27.8 133.0	27.4 133.4		28.0 132.3

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 3 November 1977 TIME 1400 (Local) 2100 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	21.2	21.2	25.0		24.7
T_{dp}	1.7	1.7	5.8		-4.0
d'_{pws}	230 1.8	230 1.8	180 4.0		calm
C	26.03	26.03	25.52		25.98
M	○	○	○		○
T_{a25}	No	No	No		No
T_{dp25}					
I	55.18	55.18	55.87		missing
I_a	44.56	44.56	43.38		44.13
I_d	28.75	28.75	27.95		28.39
N	102.01	102.01	96.59		95.56
N_a	77.08	77.08	74.08		72.12
N_b	71.98	71.98	68.52		66.97
N_c	57.64	57.64	56.26		55.29
N_d	50.80	50.80	49.43		46.18
i	30.29	33.95	5.27		12.69
i_a	24.95	30.41	3.90		12.47
i_d	16.49	19.45	3.35		8.23
$T_{g/w}$	missing	missing	25.8		42.1
T_s	26.1	25.5	37.0		37.0
ψ	missing	missing			1.1
ϵ					
El, Az	33.1 218.7	33.1 218.7	32.4 218.5		33.4 218.7

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 3 November 1977

RADIOSONDE: (0800 MST) TTAA 53150 72HMS 99877 07462 00000 00161 /////
 // 85514 14666 36011 70140 09873 03012 50584 09170 32025 40753 20569
 31528 30960 20230 553// 31538 15410 643// 32527 1052 737// 32057 88999
 77999 0

TTBB 5315/ 72HMS 00877 07462 11866 11866 11066 22860 15070 33850 14666
 44743 10872 59730 11571 66700 09873 77681 08375 88516 08167 99427 16771
 11400 20569 22317 32767 33200 553// 44187 565// 55166 619// 66138 669//
 77124 675// 88100 737// 51515 10186 //566 00970 //434 16971 0

TTCC 53152 72HMS 70861 679// 33043 50067 611// 04020 30285 561// 22025
 20645 539// 28031 10098 457// 07340 385// 88916 759// 32555 77940 32062
 41416 0

TTDD 5315/ 72HMS 11916 759// 22750 711// 33741 675// 44700 679// 55631
 667// 66524 601// 77398 623// 88300 561// 99177 511// 11168 525// 22150
 479// 33134 501// 44100 457// 55070 385// 66066 395// 0

NO ROCKETSONDE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 7 November 1977 TIME 0843 (Local) 1543 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	7.5	7.5	7.0		
T_{dp}	1.8	1.8	2.5		
W_s	230 6.3	230 6.3	180 6.3		
P	25.70	25.70	25.25		
C	90 \odot	90 \odot	100 \odot		
M	yes	yes	yes		
T_{a25}					
T_{dp25}					
I	40.07	40.07	38.44		
I_a	31.15	31.15	31.90		
I_d	22.26	22.26	20.08		
N	91.15	91.15	91.28		
N_a	69.17	69.17	71.05		
N_b	65.95	65.95	66.62		
N_c	53.75	53.75	55.12		
N_d	47.45	47.45	48.17		
i	20.19	19.70	4.32		
i_a	17.47	18.25	3.19		
i_d	11.82	11.77	2.84		
$T_{g/w}$	9.0	9.8	12.6		
T_s	6.5	6.8	11.9		
ψ	missing	missing			
ϵ					
El, Az	24.0 130.2	24.0 130.2	23.6 130.6		

REMARKS:

METSAT IV NOT OPERATED THIS DAY
MET SAT I WIND GUSTS TO 8.0 mps

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 7 November 1977

TIME 1114 (Local) 1814 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	10.3	10.3	10.4		
T _{dp}	-0.9	-0.9	1.1		
d _p W _s	210 6.3 G 10.7	210 6.3 G 10.7	180 6.3		
C	25.70	25.70	25.23		
M	60 80 180 180	60 80 180 180	100		
T _{a25}	yes	yes	yes		
T _{dp25}					
I	74.67	74.67	67.16		
I _a	59.13	59.13	55.08		
I _d	39.94	39.94	35.02		
N	89.81	89.81	100.76		
N _a	62.20	62.20	75.85		
N _b	61.80	61.80	70.42		
N _c	51.88	51.88	58.53		
N _d	44.77	44.77	50.95		
i	36.25	35.26	6.64		
i _a	30.13	32.27	4.85		
i _d	20.07	20.37	3.96		
T _{g/w}	5.9	6.0	14.0		
T _s	13.1	14.1	22.9		
ψ	missing	missing			
c					
El, Az	40.5 168.9	40.5 168.9	39.8 169.2		

REMARKS:

METSAT IV NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 7 November 1977

RADIOSONDE: (0900 MST) TTAA 57161 72HMS 99867 08657 18013 00057 /////
 /////< 85424 06661 18525 70299 04961 26016 50555 25165 21044 40716 275//
 18034 30919 335// 20052 25046 371// 20037 20198 421// 22047 15390 521//
 23543 10645 625// 20002 88318 361// 19046 77301 20053 41512 0

TTBB 5716/ 72HMS 99867 08657 11857 08062 22850 06661 33700 04961 44656
 09558 55564 18761 66548 19167 77500 25165 88472 27166 99465 25571 11456
 25373 22420 26773 33400 275// 44337 349// 55318 361// 66300 335// 77172
 455// 88122 599// 99100 625// 51515 10186 //316 345// 0

TTDD 5716/ 72HMS 11843 669// 22700 637// 33618 655// 44500 611// 55200
 553// 66155 503// 77113 449// 88100 463// 99088 449// 0

NO ROCKETSONDE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 8 November 1977 TIME 0917 (Local) 1617 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	7.3	7.3	7.6		13.5
T_{dp}	3.0	3.0	1.6		1.8
P_s	100 3.6	100 3.6	220 3.6		330 5.1
C	25.69	25.69	25.29		25.66
T_{a25}	90 \odot	90 \odot	210 \odot		\odot
T_{dp25}	yes	yes	yes		yes
I	47.02	47.02	22.66		missing
I_a	36.64	36.64	16.51		35.76
I_d	25.56	25.56	10.29		23.65
N	89.41	89.41			87.58
N_a	68.90	68.90			67.13
N_b	64.61	64.61			62.71
N_c	52.68	52.68			52.83
N_d	46.38	46.38			47.84
i	24.33	26.33	2.63		missing
i_a	20.44	24.02	2.36		missing
i_d	13.99	15.46	1.62		10.36
$T_{g/w}$	12.9	11.5	10.2		18.0
T_s	9.5	8.0	9.0		16.8
ψ	24.0	20.4			2.4
ϵ					
El, Az	28.6 137.9	28.6 137.0	28.2 137.4		28.9 136.8

REMARKS:

METSAT II NO NORMAL INCOMING DUE TO CLOUDS

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%), El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 8 November 1977

RADIOSONDE: (0900 MST) TTAA 58161 72HMS 99867 06430 00000 00077 /////
// 85418 06060 19002 70983 01342 32534 50561 14575 31564 40725 285//
31064 30924 431// 30061 25045 497// 32536 20189 497// 29551 15378 519//
24027 10634 607// 21514 88222 543// 24025 77339 32074 41819 0

TTBB 5816/ 72HMS 00867 06430 11856 06260 22802 02056 33722 00149 44674
03541 55657 04359 66652 02563 77646 02777 88543 09976 99411 26573 11400
285// 22312 425// 33222 542// 44203 521// 55200 497// 66160 491// 77123
601// 88112 567// 99100 607// 0

TTCC 58165 72HMS 70853 653// 24509 50059 609// 20506 88999 77999 0

TTDD 5816/ 72HMS 11689 657// 22333 575// 51515 10190 30380 0

NO ROCKETSONDE

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 9 November 1977

TIME 1023 (Local) 1623 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	3.8	3.8	4.1		
T _{dp}	-2.9	-2.9	-5.6		
d _p W _s	320 2.2	320 2.2	040 4.0		
P	26.27	26.27	25.71		
C	0	0	0		
T _{a25}	yes	yes	yes		
T _{dp25}					
I	49.21	49.21	49.27		
I _a	38.97	38.97	41.03		
I _d	28.43	28.43	26.14		
N	98.26	98.26	98.48		
N ^a	75.07	75.07	75.98		
N ^b	69.84	69.84	70.16		
N ^c	56.97	56.97	58.28		
N ^d	50.40	50.40	50.57		
i	26.52	30.47	5.06		
i _a	21.69	27.42	3.31		
i _d	15.29	17.71	2.49		
T _{g/w}	missing	missing	12.0		
T _s	4.0	4.4	13.3		
ψ	24.4	18.0			
ε					
El, Az	29.5 139.0	29.5 139.0	29.0 139.4		

REMARKS:

METSAT IV NOT OPERATED THIS RUN

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG69
Global Outgoing: i = WG280, i^a = GG495, i^b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 9 November 1977 TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	7.2	7.2	8.8		10.8
T_{dp}	-5.8	-5.8	-7.1		-12.7
W_s	050 1.8	050 1.8	020 1.3		calm
P	26.21	26.21	25.68		26.17
C	0	0	0		0
T_{a25}	yes	yes	yes		No
T_{dp25}					
I	69.91	69.91	68.90		missing
I_a	56.28	56.28	55.59		58.35
I_d	38.55	38.55	36.02		38.60
N	106.84	106.84	103.03		101.62
N_a	80.03	80.03	78.38		75.96
N_b	75.34	75.34	72.19		71.31
N_c	61.13	61.13	59.54		58.99
N_d	54.15	54.15	51.83		50.10
i	38.56	42.76	6.12		missing
i_a	31.86	38.66	3.55		missing
i_d	21.69	25.08	3.14		15.57
$T_{g/w}$	missing	missing	15.0		26.0
T_s	12.7	15.0	16.2		29.9
ψ	24.4	18.0			1.5
ϵ					
El, Az	40.6 183.4	40.6 183.4	39.9 183.5		41.0 183.3

REMARKS:

METSAT II NOT OPERATED THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 9 November 1977

RADIOSONDE: (0800 MST) TTAA 59151 72HMS 99883 01863 31504 00226 /////
 /////< 85561 012868 00511 70090 04374 33533 50570 16565 31550 40735 26768
 32068 30937 417// 32080 35058 495// 32607 20201 555// 32087 15385 597//
 26024 10637 643// 29536 88206 571// 32088 77267 32607 42908 0

TTBB 5915/ 72HMS 00883 01863 11873 02267 22850 01268 33764 06563 44727
 07966 55715 05371 66679 02775 77670 03175 88634 05172 99617 04972 11474
 19764 22400 26768 33353 33366 44206 571// 55188 523// 66150 597// 77119
 597// 88100 643// 0

TTCC 59151 72HMS 70855 641// 25536 50063 611// 24520 30383 569// 18505
 20641 541// 23046 10096 473// 20030 07334 413// 29597 05564 393// /////
 88999 77999 0

TTDD 5915/ 72HMS 11833 653// 22200 541// 33138 471// 44100 473// 55070
 413// 66050 393// 0

ROCKETSONDE: (1000MST) RRXX 09171 72269 81010 63101 23555 17002 25552
 19001 27552 27009 30543 29007 35532 28018 40520 29019 44513 33007 45509
 31011 47507 32006 50503 27022 55510 29022 58510 29029 60516 28036 62523
 26046 65529 31038 66534 33033 67*** 34029 68*** 34025 70*** 35032 71***
 02037

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 10 November 1977

TIME 1133 (Local) 1833 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	10.3	10.3	13.0		14.0
T_{dp}	-5.8	-5.8	-6.5		-6.5
d_p	290 3.6	290 3.6	010 1.3		calm
C	26.25	26.25	25.58		missing
M	0	0	210 - ①		230 - ①
T_{a25}	No	No	No		No
T_{dp25}					
I	65.45	65.45	missing		missing
I_a	54.28	54.28	53.95		55.29
I_d	36.85	36.85	34.61		35.91
N	104.16	104.16	103.16		100.81
N_a	77.08	77.08	78.13		75.16
N_b	72.12	72.12	72.82		70.51
N_c	58.85	58.85	59.54		57.98
N_d	51.74	51.74	52.21		48.89
i	37.59	41.35	6.11		16.05
i_a	31.29	37.01	3.19		15.78
i_d	20.61	23.34	2.74		10.28
$T_{g/w}$	17.1	18.4	18.7		24.2
T_s	16.4	14.1	26.1		25.0
ψ_s	16.6	14.2			1.2
c					
El, Az	40.2 174.9	40.2 174.9	39.5 175.1		40.6 174.7

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (ln Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 c = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 7218

DATE OF OBSERVATION 10 November 1977 TIME 1400 (Local) 2100 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	15.0	15.0	16.1		18.0
T _{dp}	-6.1	-6.1	-6.1		-9.1
W _s	340 1.8	340 1.8	200 1.8		calm
P	missing	missing	25.74		missing
C	0	0	0		0
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	53.11	53.11	missing		missing
I _a	43.19	43.19	41.85		44.08
I _d	28.43	28.43	27.04		28.71
N	100.00	100.00	98.36		95.56
N _a	74.93	74.93	75.47		71.72
N _b	70.11	70.11	70.29		67.47
N _c	57.64	57.64	57.90		55.35
N _d	50.54	50.54	50.57		47.27
i	30.29	33.73	5.16		12.54
i _a	25.05	30.31	3.55		12.22
i _d	16.59	19.55	3.04		8.16
T _{g/w}	24.2	17.4	21.0		29.1
T _s	15.2	17.1	24.9		27.0
ψ	16.6	14.2			1.2
ε					
El, Az	31.4 217.2	31.4 217.2	30.7 217.1		31.7 217.3

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 10 November 1977

RADIOSONDE: (0800 MST) TTAA 60151 72HMS 99886 02059 00000 00272 /////
 // 85592 06071 36015 70170 02068 31010 50581 12969 31522 40748 25766 29525
 30950 40757 29034 25071 507// 28039 20215 541// 29034 15396 623// 28534 10643
 679// 29041 88110 681// 29043 77105 29043 40216 0

TTBB 6015/ 72HMS 00886 02059 11876 04468 22870 06471 33700 02068 44639 02368
 55592 03175 66400 25766 77355 33156 88343 33557 99286 43757 11238 531// 22211
 523// 33110 681// 44100 679// 0

TTCC 60151 72HMS 70859 679// 29010 50064 607//25007 30384 585// 31007 20641
 543// 36009 10093 479// 30007 88999 77999

TTDD 6015/ 72HMS 11858 641// 22683 685// 33500 607// 44403 581// 55321609//
 66164 501// 77113 503// 88100 479// 99088 461// 0

ROCKETSONDE: (0800 MST) UNUS 1 KWSO 162129 RRXX 10153 72269 81010 13101 25557
 33004 30548 31009 35537 27005 39521 33014 40521 31011 42516 32006 45508 32011
 46505 31009 50510 33014 42507 28007 53511 24017 54514 25020 55513 26011 57512
 33012 58514 36009 59517 01009 59517 01009 60521 03017 61525 06024 65530 06018
 66// 07020

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 16 November 1977

TIME 0915 (Local) 1615 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	9.0	9.0	11.6		14.4
T_{dp}	-1.5	-1.5	-2.8		-4.6
W_s	calm	calm	300 4.0		355 3.6
C	26.03	26.03	25.58		26.02
T_M	0	0	0		0
T_{a25}	No	No	No		No
T_{dp25}					
I	44.03	44.03	42.84		42.91
I_a	34.80	34.80	34.56		35.94
I_d	24.78	24.78	22.50		23.87
N	96.78	96.78	96.59		94.55
N_a	73.35	73.35	74.97		72.73
N_b	68.55	68.55	70.04		67.88
N_c	55.88	55.88	57.27		56.77
N_d	49.28	49.28	50.32		48.28
i	24.33	27.90	5.06		10.83
i_a	20.13	25.26	2.72		9.78
i_d	13.41	16.31	2.23		7.93
$T_{g/w}$	11.0	11.3	15.5		21.6
T_s	10.3	11.1	15.8		19.1
ψ_s	21.3	17.9			0.9
ϵ					
El, Az	26.7 138.2	26.7 138.2	26.2 138.6		27.0 138.0

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_s = Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25} , T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 16 November 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	16.7	16.7	20.0		21.5
T _{dp}	-6.6	-6.6	-2.8		-4.0
d _p W _s	340 4.4	340 4.5	210 0.9		340 2.1
P	25.97	25.97	25.48		26.00
C	0	0	0		0
M	No	No	No		No
T _{a25}					
T _{dp25}					
I	66.63	66.63	65.14		62.44
I _a	53.19	53.19	51.69		52.96
I _d	35.93	35.93	33.40		34.41
N	104.44	104.44	102.65		101.21
N _a	77.33	77.33	78.00		76.57
N _b	72.23	72.23	72.31		70.91
N _c	58.82	58.82	59.67		58.59
N _d	51.86	51.86	51.96		49.49
i	38.83	41.94	6.22		15.25
i _a	31.42	36.60	3.31		13.42
i _d	20.85	23.39	2.74		10.42
T _{g/w}	21.0	21.2	24.2		30.6
T _s	18.0	21.5	23.5		28.4
ψ	21.3	17.9			0.9
C					
El, Az	38.7 182.0	38.7 182.9	37.9 133.0		39.1 182.8

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (g/g); Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 16 November 1977

TIME 1318 (Local) 2018 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	19.9	19.9	19.6		22.0
T _{dp}	-5.0	-5.0	-1.5		-5.2
d _p W _s	320 5.4	320 5.4	280 1.8		360 3.6
C	25.97	25.97	25.51		26.00
T _{a25}	0	0	0		0
T _{dp25}	No	No	No		No
I	59.26	59.26	59.82		56.59
I _a	47.97	47.97	46.46		48.63
I _d	31.47	31.47	30.37		31.72
N	102.92	102.92	101.39		99.39
N _a	76.55	76.55	77.12		75.35
N _b	71.74	71.74	72.06		69.90
N _c	58.47	58.47	59.67		58.18
N _d	51.65	51.65	52.34		49.09
i	35.11	37.17	5.58		14.24
i _a	28.38	33.28	3.07		11.78
i _d	18.73	21.40	2.64		9.74
T _{g/w}	23.0	23.1	20.5		32.5
T _s	18.0	20.5	22.7		29.6
ψ	21.3	17.9			0.9
ε					
El, Az	34.6 205.5	34.6 205.5	33.9 205.4		35.0 205.5

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (dir) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OC530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE:16 November 1977

RADIOSONDE: (1000MST) TTAA 66172 72HMS 99877 15466 35010 00147 // // //
 85518 12871 01506 70126 06076 04008 50580 10172 36014 40748 22969 35012 30952
 391// 04040 25074 479// 08058 20218 561// 05014 88999 77264 07558 42235 0

TTBB 6617/ 72HMS 00877 15466 12856 12670 22850 13871 33798 10270 44744 07274
 55714 06874 66635 02071 77578 03572 88560 04372 99524 08769 11482 11572 22440
 16774 33400 22969 44347 31168 55327 349// 66211 557// 77182 553// 88157 623//
 51515 10150 10190 15399 0

TTDD 6617/ 72HMS 51515 10155 0

ROCKETSONDE: UNUS 1 KWSO 211807 RRXX 16165 72269 81010 63101 23557 24006 25556
 25006 30548 34002 35534 28007 37525 26014 40520 27025 45508 27030 48505 25042
 50509 26044 55515 25046 56513 25048 58517 28037 60526 28045 62535 28049 63537
 28045 64538 26043 65539 25058 66542 25077 67544 25087 70555 28076 72// 29105
 73// 29106 74// 30080

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 17 November 1977

TIME 0926 (Local) 1626 (GMT)

AKA- ETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a	4.1	4.1			13.3
T _{dp}	-4.8	-4.8			-5.0
W _d	030	030			calm
P	26.05	26.05			26.00
C	0	0			0
M	No	No			No
T _{a25}					
T _{dp25}					
I	46.77	46.77			43.11
I _a	36.96	36.96			36.26
I _d	26.52	26.52			23.76
N	98.26	98.26			94.75
N _a	74.26	74.26			73.13
N _b	68.90	68.90			67.68
N _c	56.70	56.70			56.77
N _d	49.73	49.73			48.28
i	26.40	29.92			11.43
i _a	22.07	26.91			10.56
i _d	14.21	16.99			8.38
T _{g/w}	8.2	8.5			19.4
T _s	10.0	6.5			22.0
ψ	22.1	18.0			0.7
ε					
El, Az	27.9 140.8	27.9 140.8			28.2 140.5

REMARKS:

MET SAT II- NO OBSERVATION THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W = Wind Direction (degrees); W_s = Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 17 November 1977

TIME 1112 (Local) 1812 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	10.1	10.1			18.3
T_{dp}	-3.7	-3.7			-6.2
dP_s	180 1.8	180 1.8			070 1.0
C	26.04	26.04			26.03
M	0	0			0
T_{a25}	No	No			No
T_{dp25}					
I	63.34	63.34			59.86
I_a	49.74	49.74			50.85
I_d	34.40	34.40			33.44
N	103.62	103.62			99.39
N_a	76.94	76.94			75.76
N_b	71.85	71.85			68.90
N_c	58.58	58.85			58.18
N_d	51.74	51.74			49.29
i	34.92	38.85			14.94
i_a	28.60	34.95			12.89
i_d	19.63	22.42			10.31
$T_{g/w}$	14.8	17.6			30.5
T_s	13.9	13.5			27.2
ϵ	22.1	18.0			0.7
El, Az	37.6 168.4	37.6 168.4			38.0 168.3

REMARKS:

MET SAT II - NO OBSERVATION THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degree and Speed (m/s)); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture
 ϵ = Emissivity (%); El Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 17 November 1977

TIME 1123 (Local) 1823 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T_a	10.2	10.2			19.2
T_{dp}	-3.9	-3.9			-5.9
P	190 2.7	190 2.7			145 1.0
C	26.05	26.05			26.03
M	0	0			0
T_{a25}	No	No			NO
T_{dp25}					
I	64.56	64.56			61.15
I_a	50.79	50.79			52.01
I_d	34.82	34.82			33.98
N	103.75	103.75			99.80
N_a	77.35	77.35			75.35
N_b	71.85	71.85			69.90
N_c	58.71	58.71			57.98
N_d	51.87	51.87			48.89
i	35.52	39.28			15.35
i_a	28.98	35.36			13.22
i_d	19.96	22.72			10.65
$T_{g/w}$	14.8	17.6			31.0
T_s	13.9	13.5			27.8
ψ	22.1	18.0			0.7
ϵ					
El, Az	38.1 171.7	38.1 171.7			38.5 171.5

REMARKS:

MET SAT II -- NO OBSERVATION THIS DAY

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

radiant flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{UG530}$, $N_c = \text{RG630}$, $N_d = \text{RG69}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture

ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 17 November 1977

TIME 0904 (Local) 1604 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT III	METSAT IV
T _a					10.5
T _{dp}					-7.2
W _s					080 2.1
P					26.06
C					0
M					No
T _{a25}					
T _{dp25}					
I					37.96
I _a					32.24
I _d					21.61
N					93.54
N _a					72.73
N _b					67.27
N _c					56.36
N _d					48.08
i					10.03
i _a					8.33
i _d					7.59
T _{g/w}					14.5
T _s					15.9
ψ					0.7
ε					
El, Az					25.1 135.9

REMARKS:

MET SAT I - NO OBSERVATION THIS RUN
MET SAT II - NO OBSERVATION THIS DAY

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (Degree) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 17 November 1977

RADIOSONDE: (0800 MST) TTAA 67151 72HMS 99878 06064 00000 00169 // // // //
 85524 12871 18002 70141 070 75 26508 50578 12173 23017 40745 24169 27515 30947
 409// 31520 25069 487// 32527 20213 555// 32518 15392 615// 29528 10640 673//
 28537 88163 639// 29026 77124 27543

TTBB 6715/ 72HMS 00879 06064 11867 08866 22850 12871 33837 13673 44793 12874
 55700 07075 66539 08375 77500 12173 88400 24169 99342 34765 11300 409// 22250
 487// 33200 555// 44163 639// 55150 615// 66107 675// 77100 673// 0

TTCC 67151 72HMS 70853 703// 27525 50058 625// 28021 30381 565// 25524 20638
 553// 27017 10084 485 26004 07319 477// 23008 05546 407// // // 88999 77999 0

TTDD 6715/ 72HMS 11700 703// 22553 621// 33500 625// 44460 585// 55380 561//
 66318 589// 77300 565// 88228 571// 99216 541// 11200 553// 22160 561// 33100
 485// 44070 477// 55061 419// 66050 407// 0

ROCKETSONDE: (1100 MST) RRXX 17180 72269 81010 13101 25556 26010 26558 25007
 27560 24007 30551 21006 35538 24012 40522 26033 43518 26022 455;3 24024 47509
 25030 50513 26049 51515 25004 53517 26055 55507 27055 56510 28054 57516 28057
 58519 28073 59521 29077 60524 28052 61526 29071 62527 29077 64538 29074 65***
 28068

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 21 November 1977

TIME 0929 (Local) 1629 (GMT)

PARAMETER	METSAT I-A	METSAT I-B		METSAT II	METSAT IV
T_a	9.4	9.4		9.9	15.9
T_{dp}	0.7	0.7		-1.4	0.7
W_d, W_s	calm	calm		010 2.2	120 1.5
P	26.09	26.09		25.63	missing
C	50 \oplus 210 \ominus	50 \oplus 210 \ominus		250 \ominus	200 \ominus
M	No	No		No	NO
T_{a25}					
T_{dp25}					
I	45.43	45.43		41.74	41.85
I_a	35.48	35.48		33.74	34.02
I_d	24.81	24.81		21.39	22.23
N	89.01	89.01		84.45	53.54
N_a	66.22	66.22		66.25	52.12
N_b	61.66	61.66		63.08	50.51
N_c	52.41	52.41		52.59	44.04
N_d	45.98	45.98		45.64	35.95
i	24.21	25.90		4.85	10.94
i_a	20.06	23.51		3.07	10.80
i_d	13.88	15.15		2.54	7.67
$T_{g/w}$	13.0	14.9		missing	20.0
T_s	11.8	13.5		16.9	19.2
ψ	17.4	16.9			0.4
ϵ					
El, Az	27.4 141.8	27.4 141.8		26.9 142.2	22.7 141.6

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 21 November 1977

TIME 1325 (Local) 2025 (GMT)

PARAMETER	METSAT I-A	METSAT I-B		METSAT II	METSAT IV
T _a	19.8	19.8		18.2	21.7
T _{dp}	3.5	3.5		3.6	3.4
W _s	190 3.6	190 3.6		200 6.3	210 5.1
P	26.03	26.03		25.54	missing
C	210 - ①	210 - ①		200 - ①	80 ① 200 - ①
M	No	No		No	NO
T _{a25}					
T _{dp25}					
I	54.81	54.81		54.95	55.20
I _a	43.51	43.51		43.18	46.51
I _d	28.12	28.12		27.35	28.54
N	60.05	60.05		95.45	87.88
N _a	MISSING	MISSING		72.69	66.46
N _b				67.38	60.81
N _c				55.12	50.30
N _d				47.91	41.82
i	31.39	32.54		5.37	14.04
i _a	26.39	29.28		4.14	13.33
i _d	17.57	18.63		3.35	9.74
T _{g/w}	23.0	24.0		missing	31.0
T _s	21.0	22.9		24.7	27.0
ψ	17.4	16.9			0.4
e					
El, Az	33.0 206.4	33.0 206.4		32.3 206.3	33.4 206.4

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degree) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

adiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = GG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture
e = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 21 November 1977

RADIOSONDE: (0800 MST) TTAA 71151 72HMS 99879 06050 10005 00173 /////
 // 85532 12861 18019 70121 02870 24527 50577 10168 24514 40744 23567
 25022 30947 409// 28020 25069 513// 27513 20210 633// 28518 15384 653//
 27020 10629 653// 28045 88174 685// 27020 77114 26549 41027 0

TTBB 7115/ 72HMS 00879 06050 11869 11860 22855 13061 33850 12861 44730

02256 55722 02868 66700 02870 77642 00771 88617 12861 44730 02256 55722
 02868 66700 02870 77642 00771 88617 02761 99601 04163 11591 05159 22560
 07159 33535 08160 44506 10965 55500 10168 6640023567 77380 25569 88323
 36306 99184 675// 11174 685// 22163 641// 33114 689// 44100 653// 0

TTCC 7115 72HMS 70848 635// 27039 50058 587// 27514 88999 77999 0

TTDD 7115/ 72HMS 11873 623// 22753 645// 33618 611// 44568 569// 55500
 587// 66448 601// 77403// 577// 0

ROCKETSONDE: (0930 MST) 25564 30010 30557 25005 35546 28015 37537 26029
 38530 26036 40529 26033 45516 25031 48508 26035 50509 27030 52509 27030
 55519 26035 57518 27036 58518 28033 60/// 25031 62/// 26034 65/// 27024
 66/// 28026

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 23 November 1977

TIME 0850 (Local) 1550 (GMT)

PARAMETER	METSAT I-A	METSAT I-B		METSAT II	METSAT IV
T _a	4.5	4.5		10.8	10.1
T _{dp}	-3.7	-3.7		-3.7	-7.5
W _s	calm	calm		060 1.8	calm
P	26.03	26.03		25.59	26.03
C	180 ⊙ 210 - ⊙	180 ⊙ 210 ⊙		130 ⊙ 230 - ⊕	280 - ⊙
M	No	No		No	No
T _{a25}					
T _{dp25}					
I	49.94	49.94		27.52	missing
I _a	40.13	40.13		21.38	25.58
I _d	28.33	28.33		15.04	18.39
N	87.00	87.00		23.39	81.82
N _a	66.76	66.76		24.65	64.65
N _b	64.34	64.34		17.70	59.39
N _c	54.29	54.29		14.92	49.29
N _d	46.92	46.92			34.75
i	27.13	31.12		4.00	9.23
i _a	23.80	28.56		3.78	8.92
i _d	16.59	17.81		2.84	7.27
T _{g/w}	5.2	7.2		8.0	12.8
T _s	6.0	7.7		10.2	12.5
ψ	missing	missing		missing	missing
ε					
El, Az	21.5 133.9	21.5 133.9		21.1 134.2	21.7 133.7

REMARKS:

METSAT II CLOUDS INTERFERING WITH READING FROM NORMAL INCOMING

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%) = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSF 9415

DATE OF OBSERVATION 23 November 1977

TIME 1107 (Local) 1807 (GMT)

PARAMETER	METSAT I-A	METSAT I-B		METSAT II	METSAT IV
T _a	11.1	11.1		16.7	12.0
T _{dp}	-4.5	-4.5		-3.6	0.9
W _s	160 3.6	160 3.6		180 3.6	calm
P	26.03	26.03		25.52	26.00
C	250 - \odot	250 - \odot		230 \odot	270 \odot
M	No	No		No	No
T _{a25}					
T _{dp25}					
I	63.09	63.09		48.26	missing
I _a	49.84	49.84		27.90	28.01
I _d	33.97	33.97		16.15	16.99
N	104.56	104.56		60.56	missing
N _a	80.03	80.03		50.06	missing
N _b	73.99	73.99		43.87	missing
N _c	61.93	61.93		35.15	missing
N _d	53.35	53.35		33.88	missing
i	35.04	37.54		3.79	8.43
i _a	29.65	33.92		3.66	7.49
i _d	19.96	21.70		2.64	6.06
T _{g/w}	13.3	18.0		22.9	23.2
T _s	14.7	17.6		21.3	23.4
ψ	missing	missing		missing	missing
ϵ					
El, Az	36.0 166.9	36.0 166.9		35.3 167.1	36.4 166.7

REMARKS:

METSAT IV NO NORMAL INCOMING DUE TO CLOUDS

LEGEND

T_a = Air Temperature ($^{\circ}$ C); T_{dp} = Dew Point Temperature ($^{\circ}$ C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}$ C), Dew Point Temperature ($^{\circ}$ C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

T_{g/w} = Soil or Water Temperature ($^{\circ}$ C); T_s = Surface Temperature ($^{\circ}$ C); ψ = Soil Moisture
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 23 November 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B		METSAT II	METSAT IV
T _a	15.3	15.3		18.8	21.0
T _{dp}	-2.4	-2.4		-3.7	-6.5
W _s	170 4.5	170 4.5		180 54	calm
P	25.97	25.97		25.48	25.94
C	250 - ⊕	250 - ⊕		230 - ⊕	250 - ⊕
M	No	No		No	No
T _{a25}					
T _{dp25}					
I	67.24	67.24		63.76	51.34
I _a	53.33	53.33		50.72	45.14
I _d	36.00	36.00		33.00	34.95
N	103.75	103.75		101.52	97.37
N _a	82.44	82.44		81.92	76.77
N _b	67.96	67.96		71.30	69.90
N _c	56.97	56.97		60.30	58.18
N _d	51.47	51.47		52.47	49.49
i	37.96	39.06		6.32	16.35
i _a	31.96	35.15		4.96	14.87
i _d	21.26	22.52		3.85	11.15
T _{g/w}	22.2	21.0		28.0	missing
T _s	19.0	18.0		26.5	missing
ψ	missing	missing			missing
c					
El, Az	37.1 182.3	37.1 182.3		36.3 182.4	37.5 182.2

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_d = OG530, N_c = RG630, N_d = RG69
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 23 November1977

ROCKETSONDE: UNUS 1 KWS D 282048 RRXX 23181 72269 81010 63101 25556 26006
30552 25006 35533 26022 40525 27039 42513 27044 45504 26038 46000 25033
48502 24030 50505 26039 51507 27042 55508 26020 56506 25022 57509 24019
58515 22023 60511 23045 65530 33024 66538 330024 66538 33021 67546 32024
68550 31032 70556 34036 71/// 35033 72/// 00039 73/// 00052

NO RADIOSONDE:

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 25 November 1977

TIME: 0841 (Local) 1541 (GMT)

PARAMETER	METSAT I-A	METSAT I-B		METSAT II	METSAT IV
T_a	4.0	4.0		13.0	9.5
T_{dp}	-1.5	-1.5		0.3	-8.5
W_s	calm	calm		050	140
P	26.17	26.17		25.68	26.13
C	200 - \ominus	200 - \ominus		210 - \oplus	200 - \oplus
M	No	No		No	No
T_{a25}					
T_{dp25}					
I	30.94	30.94		30.55	29.17
I_a	24.29	24.29		25.12	22.41
I_d	16.93	16.93		16.55	14.62
N	89.41	89.41		88.70	51.72
N_a	70.51	70.51		70.69	35.96
N_b	65.68	65.68		65.77	37.37
N_c	54.69	54.69		54.36	31.52
N_d	46.92	46.92		46.76	25.25
i	17.88	19.80		4.74	7.22
i_a	15.45	18.04		4.37	6.97
i_d	10.52	11.26		3.45	5.45
$T_{g/w}$	7.2	7.1		missing	12.1
T_s	4.5	3.3		10.0	11.5
ψ	16.3	14.1			2.2
ϵ					
El, Az	19.7 132.4	19.7 132.4		19.3 132.7	19.9 132.2

REMARKS:

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 25 November 1977 TIME 1110 (Local) 1810 (GMT)

PARAMETER	METSAT I-A	METSAT I-B		METSAT II	METSAT IV
T _a	15.0	15.0		15.6	17.9
T _{dp}	-1.3	-1.3		0.4	-4.1
W _s	270 3.6	270 3.6		360 4.5	280 2.6
P	26.17	26.17		25.68	26.12
C	0	0		210-⊖	0
M	No	No		No	No
T _{a25}					
T _{dp25}					
I	59.32	59.32		60.18	60.57
I _a	46.99	46.99		48.07	49.68
I _d	31.74	31.74		31.99	32.26
N	102.55	102.55		101.23	96.77
N _a	77.75	77.75		77.74	72.73
N _b	72.25	72.25		72.15	67.07
N _c	59.79	59.79		59.06	55.35
N _d	51.21	51.21		50.22	45.86
i	34.43	35.69		6.64	15.35
i _a	28.89	31.96		5.44	14.05
i _d	19.09	20.06		4.36	10.55
T _{g/w}	20.3	20.0		missing	27.2
T _s	21.8	20.0		24.1	26.4
ψ	16.3	14.1			2.2
ε					
El, Az	35.7 167.7	35.7 167.7		35.0 167.9	36.1 167.5

REMARKS:

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (degrees) and Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global incoming: I = WG280, I_a = GG495, I_d = RG695

Global incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG69

Global outgoing: i = WG280, i_a = GG495, i_b = RG695

Global outgoing: i_a = GG495, i_b = RG695

Global outgoing: i_b = RG695

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture

ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 25 November 1977

RADIOSONDE: TTAA 75151 72HMS 99880 08062 33006 00175 ///// ///// 85544 13670
32029 70154 07266 31529 50584 10174 33021 40752 21571 34036 30957 395// 33031
27079 4859// 3303820223 571// 32579 15402 641// 10646 719// 32028 88999 77178
32583 43616

TTBB 7515/ 72HMS 00880 08062 11870 12069 22865 14070 33855 14471 44850 13670
55784 09665 66707 06465 77700 07266 88640 04069 99552 03173 11534 05775 22500
10174 33487 11572 44464 13369 55400 21571 66345 30169 77300 395// 88250 489//
99230 529// 11205 5733/ 22200 571// 33179 605// 641// 55135 673// 66125625//
77188 659// 88100 719// 44150

TTCC 75155 72HMS 70854 711// 32020 50057 677// 32008 88878 745// 32033 77999

TTDD 7515/ 72HMS 11878 745// 22758 755// 33728 749// 44700 711// 55688 659//
66648 649// 77513 687// 88500 677// 99481 675// 11455 647// 22418 419//

ROCKETSONDE: UNUS 1KWS0 282121 RRRX 25181 72269 81010 13101 25555 28007 30552
25017 31543 25020 35533 27036 36527 27041 39524 26062 40522 26061 45506 27051
49003 27059 50005 29056 52009 29048 55005 30031 56003 29022 58505 22023 60513
23021 61519 20030 62518 21014 63520 33014 64525 01014 65530 02020 66536 02020
67542 01021 68549 36020 69// 33030

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 29 November 1977

TIME 0836 (Local) 1536 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	6.9	6.9	6.3	8.8	
T _{dp}	-0.1	-0.1	-2.3	0.8	
W _d W _s	350 8.0	350 8.0	030 4.5	360 4.6	
P	26.20	26.20	25.75	26.18	
C	0	0	0	0	
M	No	No	No	yes	
T _{a25}					
T _{dp25}					
I	27.65	27.65	26.79	26.64	
I ^a	21.86	21.86	22.58	22.73	
I ^d	15.23	15.23	14.13	15.38	
N	81.77	81.77	83.67	78.59	
N ^a	64.75	64.75	67.45	62.83	
N ^b	59.92	59.92	63.42	58.59	
N ^c	50.94	50.94	52.91	49.70	
N ^d	44.10	44.10	45.64	42.02	
i					
i ^a	16.18	18.39	3.79	6.72	
i ^d	14.11	16.80	2.84	6.62	
	9.44	11.39	2.33	5.09	
T _{g/w}	6.2	8.0	8.8	9.1	
T _s	3.0	3.5	7.5	9.7	
ψ	20.0	17.5		1.8	
ε					
El, Az	18.2 131.8	18.2 131.8	17.8 132.1	18.4 131.6	
REMARKS.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 29 November 1977

TIME 0930 (Local) 1630 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T ^a	8.2	8.2	6.4	10.5	
T _{dp}	-0.7	-0.7	1.1	-1.1	
W _d , W _s	350 7.6	350 7.6	060 4.5	360 6.7	
P	26.21	26.21	25.76	26.18	
C	0	0	0	0	
M	No	NO	No	yes	
T _{a25}					
T _{dp25}					
I	42.75	42.75	41.19	42.41	
I _a	32.84	32.84	34.30	34.78	
I _d	23.11	23.11	21.70	23.01	
N	93.16	93.16	92.84	86.67	
N _a	71.31	71.31	73.15	67.27	
N _b	65.68	65.68	68.23	62.63	
N _c	55.63	55.63	56.82	52.53	
N _d	47.86	47.86	49.11	44.04	
i	23.48	27.75	5.06	10.23	
i _a	20.06	25.05	3.78	9.89	
i _d	13.45	16.92	2.94	7.52	
T _{g/w}	10.0	11.5	missing	14.7	
T _s	7.8	10.3	14.3	17.1	
ψ	20.0	17.5		1.8	
ε					
El, Az	25.9 142.5	25.9 142.5	25.4 142.8	26.2 142.3	
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG625
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 29 November 1977

TIME 1103 (Local) 1803 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	10.9	10.9	11.5	12.5	
T _{dp}	-2.1	-2.1	-2.6	-1.7	
W _d	340	340	040	360	
P _s	6.3	6.3	3.6	3.6	
C	26.22	26.22	25.72	26.17	
M	0	0	0	0	
T _{a25}	No	No	No	No	
T _{dp25}					
I	59.20	59.20	57.71	59.23	
I _a	47.10	47.10	46.62	49.37	
I _d	32.06	32.06	30.27	32.58	
N	100.13	100.13	100.22	93.74	
N _a	75.20	75.20	77.29	71.11	
N _b	69.17	69.17	71.48	66.06	
N _c	58.18	58.18	58.39	54.95	
N _d	50.27	50.27	49.78	45.86	
i	33.21	36.67	6.01	13.84	
i _a	27.93	32.89	4.26	13.25	
i _d	18.55	22.23	3.45	9.81	
T _{g/w}	16.9	15.9	missing	23.0	
T _s	16.0	16.8	21.2	21.6	
ψ	20.0	17.5			
ε					
El, Az	34.6 165.5	34.6 165.5	33.9 165.8	34.9 165.3	
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter^d [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 29 November 1977

RADIOSONDE: TTAA 79151 72HMS 99882 02035 09006 00212 // // 85559
 07262 08509 70125 05158 02011 50508 21374 01028 40730 287// 02075 30931
 421// 01588 25052 495// 01582 20197 555// 36073 15382 547// 35539 10636
 593// 32022 88189 577// 35059 77277 01607 41028 0

TTBB 7915/ 72HMS 00882 02035 11872 05861 22861 07262 33859 07662 44850
 07262 55700 05158 66680 06957 77633 10161 88541 20162 99525 20571 11500
 21374 22434 26773 33407 277// 44400 287// 55374 311// 66319 395// 77313
 395// 88290 439// 99250 495// 11243 477// 22219 529// 33215 517// 44189
 577// 55180 575// 66175 505// 77129 605// 88110 589// 99100 593// 0

TTCC 79151 72HMS 70050 627// 33012 50066 611// 34514 30388 533// 24016
 20647 545// 25524 10099 467// 26520 88999 77999 0

TTDD 7915/ 72HMS 11863 621// 22773 593// 33648 653// 44553 607// 55500
 611// 66323 557// 77300 533// 88225 559// 99153 507// 11133 517// 22100
 467// 31083 451// 51515 10190 07337 0

ROCKETSONDE:(1000 MST) RRXX 29170 72269 81010 13101 24556 25012 25548 25014
 30552 28021 35544 27038 37535 27048 40534 27061 41532 28064 45509 28078
 50508 27088 52502 26084 53000 26078 55508 28073 56512 28060 57517 28059
 59516 28051 60// 28048

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 30 November 1977

TIME 1115 (Local) 1815 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 1V	
T ^a	11.0	11.0	13.2	14.7	
T ^{dp}	-6.2	-6.2	-3.2	-4.1	
W ^d , W ^s	330 3.1	330 3.1	240 2.2	350 3.6	
P	25.90	25.90	25.43	25.89	
C	250 - ☉	250 - ☉	250 - ☉	0	
T ^M _{a25}	No	No	No	No	
T ^{dp} ₂₅					
I	60.68	60.68	59.17	55.65	
I ^a	48.33	48.33	46.74	46.09	
I ^d	32.84	32.84	30.98	30.54	
N	104.81	104.81	101.57	98.59	
N ^d	79.10	79.10	78.47	75.15	
N ^b	73.23	73.23	72.60	69.09	
N ^c	61.34	61.34	59.51	57.78	
N ^d	53.16	53.16	51.01	48.28	
i	33.45	36.91	6.32	13.94	
i ^a	28.09	33.21	5.08	13.16	
i ^d	18.49	21.37	3.96	9.84	
T ^{g/w}	16.2	17.0	18.6	28.0	
T ^s	16.0	15.0	19.8	missing	
ψ	19.0	17.4		1.1	
ε					
El, Az	34.9 163.8	34.9 163.8	34.2 160.0	35.3 168.6	
REMARKS:					

LEGEND

T = Air Temperature (°C); T^{dp} = Dew Point Temperature (°C); W^d, W^s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); N = Precipitation (Yes/No); T^a₂₅, T^{dp}₂₅ = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I^a = GG495, I^d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i^a = GG495, i^d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T^{g/w} = Soil or Water Temperature (°C); T^s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 30 November 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T_a	13.0	13.0	13.2	15.2	
T_{dp}	-4.5	-4.5	-1.5	-6.1	
W_d, W_s	310 4.9	310 4.9	330 6.3	310 7.2	
P	25.90	25.90	25.42	25.85	
C	250 - \odot	250 - \odot	250 - \odot	0	
T_{a25}	No	No	No	No	
T_{dp25}					
I	62.67	62.67	60.83	58.18	
I_a	49.24	49.24	48.07	48.52	
I_d	33.17	33.17	31.48	31.72	
N	104.57	104.57	101.23	98.99	
N_a	78.95	78.95	77.85	75.35	
N_b	72.92	72.92	72.26	69.29	
N_c	61.13	61.13	59.17	57.78	
N_d	52.98	52.98	50.56	48.28	
i	37.74	37.99	6.11	15.05	
i_a	29.73	34.08	4.96	44.25	
i_d	18.63	21.88	3.96	10.67	
$T_{g/w}$	18.4	19.5	17.9	24.5	
T_s	17.5	18.6	20.4	25.5	
ψ	19.0	17.4		1.1	
ϵ					
El, Az	35.7 181.6	35.7 181.6	35.0 181.7	36.1 181.5	
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 30 November 1977

TIME 1358 (Local) 2058 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T_a	10.3	10.3	14.7	17.1	
T_{dp}	0.4	0.4	-6.8	-9.2	
W_d, W_s	320 8.0	320 8.0	330 6.7	300 8.2	
C	25.90	25.90	25.42	25.84	
T_M	250 - \odot	250 - \odot	190 \odot 250 - \odot	0	
T_{a25}	No	No	NO	No	
T_{dp25}					
I	47.11	47.11	48.62	44.79	
I_a	39.45	39.45	37.20	37.10	
I_d	25.69	25.69	25.13	24.19	
N	95.58	95.58	95.64	93.94	
N_a	71.31	71.31	71.61	71.92	
N_b	68.36	68.36	69.24	66.46	
N_c	57.99	57.99	56.94	55.15	
N_d	49.14	49.14	48.77	46.26	
i	28.43	31.27	5.48	12.44	
i_a	23.67	27.52	4.26	11.71	
i_d	15.64	17.46	3.45	8.85	
$T_{g/w}$	15.1	15.2	18.7	22.6	
T_s	15.2	17.5	19.3	missing	
Ψ	19.0	17.4		1.1	
ϵ					
E_l, A_z	28.2 212.8	28.2 212.8	27.6 212.8	27.6 212.9	
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 30 November 1977

RADIOSONDE: (0800 MST) TTAA 80151 72HMS 99873 02857 01001 00115 /////
 85479 06866 36010 70047 02561 33028 50565 15963 31035 40731 24769 33083 30933
 415// 33592 25054 517// 32099 20197 537// 33046 15379 605// 30041 10633 607//
 ///// 88226 569// 32119 77220 32110 42776

TTBB 8015/ 72HMS 00873 02857 11863 07066 22823 06066 33720 03261 44641 05165
 55548 12761 66456 18970 77400 24769 88355 32567 9922 9// 11200 537// 22150
 605// 33117 601// 44109 567// 55100 607//

TTCC 80151 72HMS 70853 621// ///// 50061 621// ///// 30383 573// ///// 20640
 553// ///// 10085 521// 29545 07316 521// 29562 88999 77999

TTDD 8015/ 72HMS 11958 633// 22500 621// 33423 575// 44100 521// 55064 511//

ROCKETSONDE: (1200 MST) UNUS 1 KWSO 022045 RRXX 30195 72269 81010 13101 23//
 24012 25/// 26013 28549 31015 30548 28014 33544 29022 35534 29033 40522 27047
 45508 27062 48507 26081 50001 26092 51501 26083 53009 25088 54014 25080 55011
 25081 59505 26088 60509 25083 61514 25075 65533 24076 66/// 25070 67/// 26070
 70/// 27096 72/// 31102

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 5 December 1977

TIME 1058 (Local) 1758 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 1V	
T _a	16.7	16.7	18.8	21.1	
T _{dp}	-0.6	-0.6	-0.6	-4.5	
W _d , W _s	calm	calm	020 5.4	040 4.1	
P	25.90	25.90	25.46	25.89	
C	○	○	○	○	
T _{a25}	No	No	No	No	
T _{dp25}					
I	56.15	56.15	56.29	54.61	
I _a	44.77	44.77	44.44	44.82	
I _d	30.67	30.67	29.16	29.25	
N	103.22	103.22	98.99	100.52	
N _a	77.75	77.75	75.84	76.23	
N _b	72.25	72.25	70.36	70.37	
N _c	59.12	59.12	57.16	57.80	
N _d	51.07	51.07	48.55	48.17	
i	31.75	34.49	6.22	14.74	
i _a	26.68	30.82	5.08	13.97	
i _d	17.57	19.75	3.96	10.18	
T _{g/w}	23.4	24.0	25.4	28.9	
T _s	17.0	19.5	21.0	28.8	
ψ	12.6	9.3		missing	
ε					
El, Az	33.3 163.8	33.3 163.8	32.6 164.1	33.6 163.6	
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI

DATE OF OBSERVATION 5 December 1977

TIME 1115 (Local) 1815 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT IV	
T_a	16.7	16.7	19.2	21.6	
T_{dp}	-0.6	-0.6	-0.6	-4.0	
W_d, W_s	310 2.2	310 2.2	010 4.9	330 5.1	
P	25.90	25.90	25.45	25.88	
C	○	○	○	○	
T_{a25}	NO	NO	NO	NO	
T_{dp25}					
I	57.86	57.86	57.73	56.10	
I_a	46.04	46.04	45.65	46.09	
I_d	31.20	31.20	30.07	30.11	
N	103.89	103.89	100.00	100.11	
N_a	78.28	78.28	76.62	75.81	
N_b	72.52	72.52	70.92	69.74	
N_c	59.38	59.38	57.94	57.38	
N_d	51.34	51.34	49.22	47.96	
i	32.60	35.26	6.22	15.25	
i_a	27.35	31.44	4.96	14.34	
i_d	18.00	20.06	3.96	10.55	
$T_{g/w}$	23.4	24.1	24.0	28.9	
T_s	18.2	20.7	27.6	28.8	
ψ	12.6	9.3	27.6	missing	
ϵ					
El, Az	34.1 168.4	34.1 168.4	33.4 168.7	34.5 168.3	
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25
meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 5 December 1977

RADIOSONDE: (100MST) TTAA 55170 72HMS 99873 19070 36010 00080 // // //
 85480 15669 36016 70088 04767 31537 50576 11167 30039 40744 22567 31558 30949
 387// 31050 25072 475// 32580 20216 577// 32115 15394 631// 32108 10640 667//
 30549 88156 655// 32646 77174 32656 41510 0

TTBB 5517/ 72HMS 00873 19070 11850 15669 22733 04866 33700 04667 44679 06471
 55458 15966 66438 17168 77400 22567 88372 25567 99316 11298 393// 22200 577//
 33175 627// 44156 633// 55150 631// 66138 625// 77116 693// 88100 665// 0

TTCC 55177 72HMS 70855 633// 20003 50052 611// // // 88999 77999 0

TTDD 5517/ 72HMS 11783 715// 22700 633// 33603 639// 44500 611// 0

ROCKETSONDE: (1115 MST) RRXX 05182 72269 81010 13101 25560 09006 30551 22011
 35537 23032 37528 25035 40518 25054 45502 27057 47005 27061 48007 28067 49003
 28072 50501 28067 53506 27062 55516 28068 57514 28071 60530 29070 62534 29082
 63535 29087 64536 30092 65544 30079 66*** 29063 *****

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA IV

DATE OF OBSERVATION 6 December 1977

TIME 0914 (Local) 1614 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 1V	
T_a	5.0	5.0	6.3	7.3	
T_{dp}	-0.4	-0.4	-3.0	-0.5	
W_d, W_s	170 1.8	170 1.8	180 3.6	calm	
P	26.17	26.17	25.72	26.18	
C	○	○	○	○	
T_{a25}	No	No	No	No	
T_{dp25}					
I	35.81	35.81	36.23	33.78	
I_a	27.77	27.77	30.68	28.86	
I_d	20.87	20.87	19.68	19.35	
N	92.09	92.09	92.73	87.96	
N_a	71.45	71.45	73.49	69.11	
N_b	66.76	66.76	69.02	63.88	
N_c	56.17	56.17	57.05	53.62	
N_d	48.79	48.79	49.22	45.23	
i	21.17	24.16	4.85	9.63	
i_a	18.14	22.16	3.55	9.44	
i_d	12.47	15.29	2.84	7.27	
$T_{g/w}$	7.1	8.2	8.0	12.4	
T_s	6.3	6.0	8.4	13.7	
ψ	18.3	14.4		0.1	
ϵ					
El, Az	22.6 139.3	22.6 139.3	22.1 139.6	22.8 139.1	
REMARKS:					

LEGEND

T = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GC495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT B

DATE OF OBSERVATION 6 December 1977

TIME 0930 (Local) 1630 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 1V	
T _a	6.0	6.0	7.1	8.5	
T _{dp}	-0.5	-0.5	-2.5	-1.1	
W _d , W _s	170 1.8	170 1.8	170 4.0	calm	
P	26.17	26.17	25.72	26.18	
C	○	○	○	○	
M	No	No	No	No	
T _{a25}					
T _{dp25}					
I	39.83	39.83	40.12	37.50	
I _a	31.15	31.15	33.70	31.71	
I _d	22.26	22.26	21.70	21.29	
N	94.37	94.37	94.74	90.05	
N _a	73.06	73.06	74.83	70.16	
N _b	68.36	68.36	69.91	65.13	
N _c	56.97	56.97	57.83	54.66	
N _d	49.46	49.46	49.78	45.65	
i	22.87	26.44	5.16	10.63	
i _a	19.67	24.02	3.78	10.34	
i _d	13.45	16.49	3.04	7.88	
T _{g/w}	7.2	9.0	10.0	12.4	
T _s	6.5	6.2	13.7	13.7	
ψ	18.3	14.4		0.1	
ε					
El, Az	24.7 142.6	24.7 142.6	24.2 142.9	25.0 142.4	
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 6 December 1977

RADIOSONDE: (0800 MST) TTAA 56151 72HMS 99882 03257 19008 00210 /////
 85555 06461 19021 70139 04268 34523 50580 13165 31528 40746 25363 30543 30949
 39560 30057 25072 465// 29074 20218 525// 29570 15399 623// 30067 10643 715//
 30551 88100 715// 30551 77173 29081 41216

TTBB 5615/ 72HMS 00882 03257 11861 02457 22858 06460 33828 05463 44814 06864
 55726 03066 66700 04268 77687 04668 88400

25363 99308 39160 11300 39560 22240 477// 33179 575// 44171 567// 55150 623//
 66100 715//

TTCC 56157 72HMS 70854 721// 31026 50056 611// 88999 77999

TTDD 5615/ 72HMS 11700 721// 22595 715// 33558 613// 44500
 011//

ROCKETSONDE: (0930 MST) RRXX 06163 72269 81010 13101 24559 21002 25355 15001
 30551 22011 31552 23013 35539 24029 40522 26054 41520 26066 42517 26071 45507
 27067 47502 28078 48500 28084 49504 28082 50501 28082 51002 28085 52501 29088
 55509 30078 60527 29075 63*** 30889

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 7 December 1977

TIME 0920 (Local) 1620 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 1V	
T _a	1.0	1.0	9.5	5.8	
T _{dp}	-2.3	-2.3	-3.7	-4.0	
W _d	calm	calm	calm	calm	
P	25.97	25.97	25.48	25.93	
C	○	○	○	○	
T _{a25}	No	No	No	No	
T _{dp25}					
I	37.15	37.15	36.34	39.43	
i _a	28.83	28.83	30.80	33.30	
i _d	21.73	21.73	19.78	22.90	
N	92.76	92.76	92.06	91.94	
N ^a	72.12	72.12	72.71	71.41	
N ^b	67.29	67.29	68.12	66.80	
N ^c	56.30	56.30	56.26	55.71	
N ^d	48.93	48.93	48.77	46.70	
i	21.41	24.70	missing	10.73	
i _a	18.43	22.68	3.07	10.25	
i _d	12.80	15.62	2.54	7.76	
T _{g/w}	1.3	3.0	14.2	12.7	
T _s	5.0	1.0	15.0	11.2	
Ψ	17.7	16.8		1.1	
ε					
El, Az	23.2 140.5	23.2 140.5	22.7 140.8	23.5 140.3	
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.); Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N^a = GG495, N^b = OG530, N^c = RG630, N^d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); Ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 7 December 1977

TIME 1300 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	9.0	9.0	13.8	16.0	
T _{dp}	-1.7	-1.7	-3.2	-2.5	
W _d	calm	calm	210	-2.5	
P	25.90	25.90	25.33	25.87	
C	○	○	○	○	
M	No	No	No	No	
T _{a25}					
T _{dp25}					
I	60.41	60.41	59.47	61.01	
I _a	47.73	47.73	46.86	50.53	
I _d	32.48	32.48	30.88	33.66	
N	102.95	102.95	99.10	99.48	
N _a	77.88	77.88	76.51	76.02	
N _b	72.52	72.52	71.36	70.37	
N _c	60.19	60.19	58.05	58.64	
N _d	52.28	52.28	50.00	49.21	
i	33.58	37.54	missing	15.35	
i _a	28.60	33.92	5.32	14.61	
i _d	19.09	23.10	3.96	10.55	
T _{g/w}	16.2	16.1	17.9	22.7	
T _s	17.4	18.0	19.6	25.5	
ψ	17.7	16.8		1.1	
ε					
E1, Az	34.7 180.8	34.7 180.8	35.1 180.7	35.1 180.7	
REMARKS:					

LEGEND

T_a = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Preci-
pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25
meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); E1, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 7 December 1977

TIME 1432 (Local) 2032 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 1V	
T_a	11.5	11.5	15.5	21.0	
T_{dp}	-1.6	-1.6	-2.5	-5.0	
W_d	calm	calm	180	calm	
P	25.90	25.90	25.28	25.80	
C	○	○	○	○	
T_{a25}	No	No	No	No	
T_{dp25}					
I	55.54	55.54	52.20	51.19	
I_a	44.24	44.24	40.10	42.92	
I_d	30.03	30.03	27.25	28.39	
N	101.21	101.21	96.09	98.22	
N_a	77.08	77.08	74.94	75.60	
N_b	71.45	71.45	69.91	69.53	
N_c	59.38	59.38	57.16	58.22	
N_d	51.47	51.47	49.33	48.38	
i	31.75	34.93	missing	13.14	
i_a	26.87	31.65	4.73	12.43	
i_d	17.90	21.69	3.85	9.21	
$T_{g/w}$	17.1	18.0	20.4	29.9	
T_s	17.8	18.3	23.5	29.0	
ψ	17.7	16.8		1.1	
ϵ					
El, Az	30.3 205.5	30.3 205.5	29.6 205.4	30.7 205.5	
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 7 December 1977

RADIOSONDE: (0800 MST) TTAA 57151 72HMS 99874 00356 00000 00153 // // // //
 85483 05860 17006 70090 07476 31521 50577 11964 30036 40745 23767 31039 30948
 407// 32042 25069 497// 31043 20214 549// 28559 15394 623// 28574 10642 669//
 29066 88116 657// 30066 77163 28587 40503

TTBB 5715/ 72HMS 00874 00356 11863 03860 22818 09267 33798 08869 44776 09674
 55718 09076 66644 03065 77607 00567 88558 03767 99500 11964 11491 10570 22400
 23767 33334 34467 44251 503// 55209 549// 66150 623// 77132 625// 88116 657//
 99100 669//

TTCC 57151 72HMS 70856 717// 30010 50060 619// 30519 3080 567// 28014 20639
 543// 28007 10087 495// 26502 88999 77999

TTDD 5715/ 72HMS 11883 653// 22763 717// 33663 741// 44603 645// 55320 567//
 66273 581// 77248 545// 88160 515// 99113 535// 11100 495// 22078 505// 51515
 10190 07320

ROCKETSONDE: (0940 MST) RRXX 07164 72269 81010 63101 25549 11002 30545 22011
 33535 25021 35533 26027 40513 27050 43509 28060 45502 28052 47006 28068 48010
 28067 50005 28082 51009 28075 52006 29068 55505 30060 58510 28051 60520 28051
 62523 29053 64535 29052 65*** 29055 68*** 30082 *****

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 12 December 1977

TIME 0834 (Local) 1534 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T^a T_{dp}^w W_d P C T_{a25}^M T_{dp25}			5.9 -8.2 010 0.4 25.52 ○ No	4.1 -9.3 CALM 25.95 ○ No	
I I_a I_d N N_a N_b N_c N_d i i_a i_d			23.13 18.36 13.52 80.65 65.21 61.52 51.12 44.30 3.58 2.36 2.03	29.17 25.48 17.63 81.25 64.93 60.31 50.89 43.56 9.02 6.99 5.33	
$T_{g/w}$ T_s ψ ϵ E_l, A_z			5.1 5.0 15.4 131.9	7.2 4.1 0.9 16.0 131.5	
REMARKS: METSAT I NOT OPERATED THIS OBSERVATION.					

LEGEND

T^a = Air Temperature ($^{\circ}\text{C}$); T_{dp}^w = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Preci-
 pitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25
 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}, I_a = \text{GG495}, I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}, N_a = \text{GG495}, N_b = \text{OG530}, N_c = \text{RG630}, N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}, i_a = \text{GG495}, i_b = \text{RG69}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 12 December 1977

TIME 0934 (Local) 1634 (GMT)

PARAMETER	METSAT 1-A	METSAT 1-B	METSAT 11	METSAT 1V	
T_a	2.8	2.8	9.9	8.1	
T_{dp}	-5.1	-5.1	-5.0	-6.4	
W_d, W_s	CALM	CALM	250 1.8 180	1.0	
P	26.01	26.01	25.52	25.95	
C	180 0	180 0	0	180 0	
T_{a25}	No	No	No	No	
T_{dp25}					
I	39.95	39.95	38.69	45.98	
I_a	31.36	31.36	30.68	38.05	
I_d	21.83	21.83	21.09	25.38	
N	92.49	92.49	91.05	91.10	
N_a	71.98	71.98	71.81	70.99	
N_b	66.62	66.62	67.23	65.34	
N_c	56.17	56.17	55.26	55.08	
N_d	48.39	48.39	47.43	46.49	
i	2.63	25.46	4.85	14.33	
i_a	19.29	23.40	3.19	10.98	
i_d	13.23	15.15	2.64	8.12	
$T_{g/w}$	9.5	11.8	11.1	13.4	
T_s	6.0	6.3	13.8	14.3	
ψ	3.9	5.3		0.9	
ϵ					
El, Az	24.3 143.3	24.3 143.3	23.8 143.6	24.6 143.1	
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{VG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%); ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 12 December 1977

RADIOSONDE (0800 MST) TTAA 62151 72HMS 99875 00555 00000 00165 ///// ///// 85496
 09264 17511 70098 04678 26527 50574 13975 29520 40740 25371 29017 30941 427//
 28025 25062 521// 26023 20205 509// 25545 15391 569// 25044 10641 663// 26034
 88221 563// 26056 77188 26056 41912 0

TTBB 6215/ 72HMS 00875 00555 11850 09264 22835 12466 33755 06062 44726 04060
 55700 04678 66678 03679 77530 12172 88490 14175 99400 25371 11344 34766 22250
 521// 33221 563// 44200 509// 55180 499// 66122 647// 77100 663// 51515 10186
 //865 04462 0

TTCC 62153 72HMS 70855 671// 26019 50058 677// 25515 30374 571// 30009 20632
 551// 0

TTDD 6215/ 72HMS 11913 659// 22793 713// 33653 661// 44598 681// 55448 655//
 66278 557// 77193 537// 0

ROCKETSONDE (0900 MST) RRXX 12160 72269 81010 13101 24/// 26004 25559 28004
 27556 28003 30552 27016 31545 27020 35533 27047 36528 27055 37523 27057 38517
 27054 40520 27051 41521 28049 45506 28049 48504 27041 50503 26026 53509 26039
 55507 26050 56506 26054 60526 28065 62536 28068 65542 27080 66548 27088 67///
 27101

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 14 December 1977

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T_a	10.9	10.9	15.5	16.6	
T_{dp}	-10.0	-10.0	-1.7	-9.5	
W_d	090	090	200	180	
W_s	0.4	0.4	2.7	1.5	
P	26.03	26.03	25.57	25.98	
C	210-①	210-①	230-①①	140-① 250-②	
M	No	No	No	No	
T_{a25}					
T_{dp25}					
I	58.47	58.47	58.03	57.29	
I_a	46.36	46.36	45.53	48.10	
I_d	32.06	32.06	30.17	32.15	
N	103.08	103.08	98.32	87.12	
N_a	79.09	79.09	75.50	67.02	
N_b	72.79	72.79	69.91	61.78	
N_c	61.26	61.26	57.16	53.19	
N_d	52.95	52.95	48.32	45.86	
i	33.21	35.36	5.90	15.05	
i_a	28.02	31.96	4.61	13.78	
i_d	18.76	20.68	3.55	10.67	
$T_{g/w}$	12.9	19.5	26.0	25.2	
T_s	13.1	13.1	25.3	23.2	
Ψ	5.0	5.1		0.8	
ϵ					
E_l, A_z	34.1 180.0	34.1 180.0	33.4 180.1	34.5 179.8	
REMARKS:					
NOTE DIFFERENT FORMAT FOR RADIOSONDE DATA AND ROCKETSONDE DATA EFFECTIVE THIS DATE					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_d = \text{RG695}$
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); Ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 7218

DATE OF OBSERVATION 14 December 1977

TIME 1304 (Local) 2004 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T_a T_{dp} W_d W_s C T_{a25} T_{dp25}	13.1 -9.0 CALM 26.00 210-⊖ No	13.1 -9.0 CALM 26.00 210-⊖ No	17.9 -7.6 210 2.7 25.54 220-⊖ No	18.2 -8.6 CALM 25.96 140-⊖ 250-⊕ No	
I I_a I_d N N_a N_b N_c N_d i i_a i_d	52.50 42.03 29.07 96.38 74.17 69.30 56.97 47.19 30.05 24.86 16.49	52.30 42.03 29.07 96.38 74.17 69.30 56.97 47.19 32.43 29.07 18.73	56.16 42.51 28.35 99.52 77.07 71.70 58.61 49.89 5.37 4.26 3.25	52.08 43.87 29.46 87.33 69.11 63.04 53.19 45.02 13.94 13.16 9.70	
$T_{g/w}$ T_s ψ ϵ El, Az	14.0 15.1 5.0 32.0 107.4	19.5 17.8 5.1 32.0 197.4	26.6 26.5 313 197.4	25.2 24.8 0.8 32.5 197.3	
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d , W_s = Wind Direction (deg.)
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25} , T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

GEODETIC COORDINATES
32.88865 LAT DEG
106.09965 LON DEG

RADIOSONDE DATA SIGNIFICANT LEVEL DATA

3480310857
HULLUMAN

STATION ALTITUDE 4126.59 FEET MSL
14 DEC. 77 0800 HRS MST
ASCENSION NO. 857

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM. PERCENT
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	WET POINT CENTIGRADE	
877.1	4126.6	.0	-1.4	90.0
867.3	4428.0	3.7	-2.9	62.0
855.3	4803.3	9.7	-4.3	25.0
850.0	4972.5	9.9	-4.2	25.0
722.2	9377.8	6.1	-23.2	10.0
700.0	10214.2	4.9	-10.4	32.0
588.3	14806.5	-1.6	-22.8	18.0
500.0	18565.0	-12.2	-27.3	27.0
438.3	22217.7	-19.5	-36.2	17.0
400.0	24425.4	-23.5	-43.4	14.0
353.3	27352.8	-31.1	-49.1	15.0
300.0	31071.9	-40.8		
250.0	35039.2	-51.4		
209.3	38742.6	-59.6		
200.0	39670.8	-60.1		
187.8	40955.9	-59.6		
176.3	42017.7	-59.3		
155.3	44651.3	-58.4		
150.0	45567.1	-57.2		
133.8	47908.0	-61.1		
110.8	51730.5	-61.6		
100.0	53785.8	-65.7		
93.3	55152.8	-68.4		
80.8	57990.3	-65.3		
70.0	60632.3	-66.6		
50.0	67527.6	-63.2		
32.3	76582.7	-58.6		
30.0	77906.8	-55.3		
25.3	81436.2	-56.8		
24.5	82099.6	-56.6		

NOTE: ROCKETSONDE DATA ON FOLLOWING PAGE
RECORD COPY

GEODETIC COLLIMATIONS
31.000065 LAT DEG
126.349965 LONG DEG

SIGNIFICANT LEVEL DATA

348 JUL 27 1967
HULL OF A.

REL. HUM.	TEMPERATURE	GEOMETRIC	PRESSURE
PERCENT	AIR DEGREE	ALTITUDE	
	POINT	FEET	
	DEGREES	MSL	
	CENTIGRADE	FEET	

20.0	46303.3	-55.3
16.3	90598.3	-50.5

ROCKETSONDE (1200·MST) UNUS 1 KMSD 141910 RRX 14191 72269 81010 63101
24555 36002 25555 28005 28549 25010 29547 26017 30541 27025 35529 28040
40514 29070 45511 29061 50009 27066 51010 26066 52007 25065 55503 27068
60526 27069 65541 27079 69544 27101 70/// 27111 72/// 28123

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NIMBUS VI & DMSP 9415

DATE OF OBSERVATION 15 December 1977

TIME 1125 (Local) 1825 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T_a T_{dp} W_d, W_s P C T_{a25} T_{dp25}	8.9 2. 2.3 CALM 25.90 ○ No	8.9 2.3 CALM 25.90 ○ No	15.0 -9.7 210 3.6 25.45 ○ No	14.2 -8.8 CALM 25.87 ○ No	
I I_a I_d N N_a N_b N_c N_d i i_a i_d	56.76 44.77 30.56 100.54 76.81 70.24 59.11 51.07 31.51 26.58 17.79	56.76 44.77 30.56 100.54 76.81 70.24 59.11 51.07 34.60 30.93 19.24	56.60 44.20 29.47 100.00 77.63 72.37 59.40 50.67 6.00 4.73 3.75	59.52 49.26 32.58 98.84 75.60 69.94 58.01 48.80 14.74 13.25 10.30	
$T_{g/w}$ T_s ψ ϵ E_l, A_z	14.5 17.5 6.7 33.4 170.2	16.3 17.1 7.8 33.4 170.2	18.9 24.3 32.7 170.4	22.9 23.7 0.5 33.8 170.0	
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
 Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
 Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

GEODETIC COORDINATES
32.88865 LAT NEG
106.09965 LON NFG

SIGNIFICANT LEVEL DATA
3490010860
HOLLOMAN

STATION ALTITUDE 4126.59 FEET MSL
15 DEC. 77 0800 HRS MST
ASCENSION NO. 860

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT
873.8	4126.6	-8	-7.1	62.0
864.3	4420.5	6.0	-6.6	40.0
850.0	4871.3	9.1	-5.5	35.0
839.0	5226.1	10.5	-5.5	32.0
829.8	5526.9	10.0	-6.3	31.0
762.3	7829.9	7.6	-4.2	43.0
700.0	10119.0	4.0	-9.0	38.0
587.8	14707.2	-4.0	-18.2	32.0
553.3	16200.4	-7.8	-19.9	37.0
512.3	18216.5	-9.5	-23.4	31.0
500.0	18329.8	-11.2	-24.9	31.0
400.0	24294.6	-24.8	-38.3	27.0
322.3	29298.2	-38.4	-49.7	29.0
300.0	30396.7	-42.8		
270.3	33109.9	-48.5		
250.0	34843.8	-50.3		
228.8	36733.8	-50.8		
200.0	39574.0	-54.7		
183.3	41379.8	-59.1		
178.3	41948.1	-58.0		
166.3	43376.8	-60.0		
157.8	44455.2	-56.9		
150.0	45499.2	-59.1		
122.8	49531.9	-66.0		
114.8	50979.6	-62.1		
100.0	53636.5	-66.6		
77.3	58693.7	-68.9		
70.0	60638.6	-67.2		
60.8	63408.6	-67.7		

RECORD COPY

ROCKETSONDE (1120 MST) UNUS 1 KWS 151820 RRXX 15182 72269 81010 13101
24561 02003 25559 01001 28554 27012 30551 28026 35537 27051 36523 27062
40519 27065 41524 27070 45508 28067 46504 28067 47000 27067 50501 27063
51005 28059 55501 28049 57511 26044 60531 28046 61539 28046 62543 28052
63545 29064 64/// 28079

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOAA V

DATE OF OBSERVATION 21 December 1977

TIME 0852 (Local) 1552 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	-5.9	-5.9	-3.0	-3.7	
T _{dp}	-15.8	-15.8	-15.9	-16.0	
W _d , W _s	340 0.9	340 0.9	020 3.1	CALM	
P	26.43	26.43	25.95	26.38	
C	230-⊙	230-⊙	220 ⊙	270- ⊙	
T _{a25}	No	No	No	No	
T _{dp25}					
I	29.48	29.48	22.76	41.82	
I _a	23.34	23.34	17.39	35.73	
I _d	17.68	17.68	12.31	25.38	
N	93.43	93.43	98.21	92.99	
N _a	74.53	74.53	75.17	73.09	
N _b	68.90	68.90	70.47	68.48	
N _c	59.79	59.79	59.28	58.22	
N _d	53.22	53.22	53.58	52.36	
i	18.00	19.70	3.16	9.63	
i _a	15.74	18.25	2.25	8.92	
i _d	10.95	12.28	1.83	7.15	
T _{g/w}	-9.2	-16.0	missing	-0.6	
T _s	-4.6	-9.6	-4.7	-3.1	
ψ	5.1	5.0		0.1	
ε					
El, Az	17.6 134.5	17.6 134.5	17.3 134.7	17.8 134.3	
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.), Wind Speed (m/s); P = Station Pressure (in Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, " = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_d = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION DMSP 9415

DATE OF OBSERVATION 21 December 1977

TIME 1120 (Local) 1820 (GMT)

PARA-METER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	2.9	2.9	6.1	4.9	
T _{dp}	-5.3	-5.3	-19.5	-14.0	
W _d , W _s	CALM	CALM	230 0.9	250 2.1	
P	26.40	26.40	25.89	26.36	
C	220-⊖	220-⊖	210-⊕	220-⊖ 250-⊖	
T _{a25}	No	No	No	No	
T _{dp25}					
I	56.76	56.76	59.85	53.13	
I _a	45.20	45.20	45.41	44.29	
I _d	31.63	31.63	31.58	30.00	
N	95.98	95.98	106.04	96.34	
N _a	73.73	73.73	82.33	73.39	
N _b	68.23	68.23	77.07	65.75	
N _c	57.10	57.10	63.76	55.36	
N _d	50.80	50.80	54.92	47.12	
i	31.75	34.71	6.53	14.74	
i _a	26.49	31.55	4.02	13.79	
i _d	17.90	20.47	3.04	10.06	
T _{g/w}	2.8	1.7	missing	14.9	
T _s	6.4	4.3	27.0	16.8	
ψ	5.1	5.0		0.1	
ε					
El, Az	32.9 168.1	32.9 168.1	32.2 168.4	33.2 168.0	
REMARKS:					
CLOUDS BETWEEN SUN AND SENSORS AT MS IV AND MS I.					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.) Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%); ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION NOON RUN

DATE OF OBSERVATION 21 December 77

TIME 1200 (Local) 1900 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T _a	0.6	0.6	7.5	6.7	
T _{dp}	-2.3	-2.3	-14.8	-17.2	
W _d	220	220	220	CALM	
W _s	1.8	1.8	0.4		
C	26.35	26.35	25.87	26.35	
T _M	220- Ⓢ	220- Ⓢ	220- Ⓢ	220- Ⓢ 250- Ⓢ	
T _{a25}	No	No	No	No	
T _{dp25}					
I	52.38	52.38	61.75	52.68	
I _a	43.08	43.08	46.86	43.45	
I _d	29.18	29.18	32.09	29.14	
N	79.36	79.36	103.24	61.15	
N _a	58.58	58.58	77.40	44.40	
N _b	54.96	54.96	71.36	39.58	
N _c	44.77	44.77	60.29	33.09	
N _d	38.87	38.87	49.66	27.64	
i	32.60	33.51	6.53	15.05	
i _a	25.43	30.31	4.02	14.25	
i _d	16.92	19.45	3.55	10.30	
T _{g/w}	6.0	4.6	missing	15.7	
T _s	7.5	6.0	17.9	19.8	
ψ	5.1	5.0		0.1	
ε					
El, Az	33.8 179.1	33.8 179.1	33.1 179.2	34.2 179.0	
REMARKS:					

LEGEND

T = Air Temperature (°C); T_{dp} = Dew Point Temperature (°C); W_d, W_s = Wind Direction (deg.).
Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition (symbolic); N = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature (°C), Dew Point Temperature (°C) at 25 meter height.

Radiant Flux: Global Incoming: I = WG280, I_a = GG495, I_d = RG695
Normal Incoming: N = WG280, N_a = GG495, N_b = OG530, N_c = RG630, N_d = RG695
Global Outgoing: i = WG280, i_a = GG495, i_b = RG695
(Units: milliwatts per square centimeter [mW cm⁻²])

T_{g/w} = Soil or Water Temperature (°C); T_s = Surface Temperature (°C); ψ = Soil Moisture (%);
ε = Emissivity (%); El, Az = Solar Elevation, Solar Azimuth (degrees).

21 December 1977

ATION ALTITUDE 4126.59 FEET MSL
DEC. 77 1230 HRS MST
CENSION NO. 874

SIGNIFICANT LEVEL DATA

3550010874
HOLLOMAN

GEODETIC COORDINATES
32.88865 LAT NEG
106.09965 LON NEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT
888.0	4126.6	6.0	-15.8	19.0
878.0	4433.3	4.1	-16.2	21.0
850.0	5294.5	2.2	-17.8	21.0
838.3	5661.3	1.9	-18.6	20.0
824.8	6090.8	2.2	-18.4	20.0
760.8	8216.4	-1.0	-21.7	19.0
700.0	10395.8	-0.8	-21.5	19.0
620.6	13528.4	-3.9	-24.1	19.0
570.8	15673.2	-8.5	-28.5	18.0
500.0	18987.3	-16.5	-35.7	17.0
463.8	20823.1	-20.8	-36.0	24.0
456.3	21217.9	-20.9	-32.6	34.0
441.3	22024.6	-22.5	-28.3	59.0
400.0	24372.7	-25.8	-32.9	51.0
300.0	30982.2	-41.4	-48.4	46.0
288.3	31862.1	-43.4	-50.7	44.0
250.0	34948.8	-51.0		
200.0	39574.7	-62.5		
183.8	41268.3	-65.1		

ROCKETSONDE (1120 MST) UNUS 1 KMSD 211815 RRXX 21182 72269 81010
63101 25558 01003 30554 24008 33549 25022 35543 26039 40518 24086
41516 24082 42514 24083 43505 24090 44000 24099 45503 24103 47003
24085 48007 24083 50003 23086 52507 22092 53503 22091 54507 23075
55512 23075 56517 23078 60514 24084 61514 25087 62521 25090 63524
25092 65526 26106 67529 25101 69/// 25106

RECORD COPY

ATMOSPHERIC SCIENCES LABORATORY
METEOROLOGICAL SATELLITE CALIBRATION DATA

SATELLITE IDENTIFICATION LANDSAT A

DATE OF OBSERVATION 30 December 1977

TIME 0832 (Local) 1532 (GMT)

PARAMETER	METSAT I-A	METSAT I-B	METSAT II	METSAT IV	
T_a T_{dp} W_d, W_s P C T_{a25} T_{dp25}			4.2 -0.2 050 1.3 25.54 E80 \oplus YES		
I I_a I_d N N_a N_b N_c N_d i i_a i_d			27.33 22.58 16.45 76.29 62.08 59.28 50.11 43.51 3.37 2.96 2.43		
$T_{g/w}$ T_s ψ ϵ E_l, A_z			4.8 4.8 13.6 130.3		
REMARKS:					

LEGEND

T_a = Air Temperature ($^{\circ}\text{C}$); T_{dp} = Dew Point Temperature ($^{\circ}\text{C}$); W_d, W_s = Wind Direction (deg.)
 Wind Speed (m/s); P = Station Pressure (In Hg); C = Sky Condition^s (symbolic); M = Precipitation (Yes/No); T_{a25}, T_{dp25} = Air Temperature ($^{\circ}\text{C}$), Dew Point Temperature ($^{\circ}\text{C}$) at 25 meter height.

Radiant Flux: Global Incoming: $I = \text{WG280}$, $I_a = \text{GG495}$, $I_d = \text{RG695}$
 Normal Incoming: $N = \text{WG280}$, $N_a = \text{GG495}$, $N_b = \text{OG530}$, $N_c = \text{RG630}$, $N_d = \text{RG695}$
 Global Outgoing: $i = \text{WG280}$, $i_a = \text{GG495}$, $i_b = \text{RG695}$
 (Units: milliwatts per square centimeter [mW cm^{-2}])

$T_{g/w}$ = Soil or Water Temperature ($^{\circ}\text{C}$); T_s = Surface Temperature ($^{\circ}\text{C}$); ψ = Soil Moisture (%);
 ϵ = Emissivity (%); E_l, A_z = Solar Elevation, Solar Azimuth (degrees).

METEOROLOGICAL SATELLITE CALIBRATION DATA

DATE: 30 December 1977

RADIOSONDE FLIGHT NOT MADE THIS DATE

ROCKETSONDE (0900 MST) RRXX 30160 72269 81010 13101

25///	29564	28///	27512	29///	28014	30///	27521	31///	27538	33///	25528
35///	24529	40///	23524	43///	22522	45///	21023	46///	22025	47///	23024
48///	23525	49///	26028	50///	25528	52///	24531	53///	23538	55///	24040
56///	24537	58///	25036	59///	23545	60///	23552	61///	24559	62///	25575
63///	26091	64///	27099	65///	27103	67///	26611	68///	26626		

JJJ